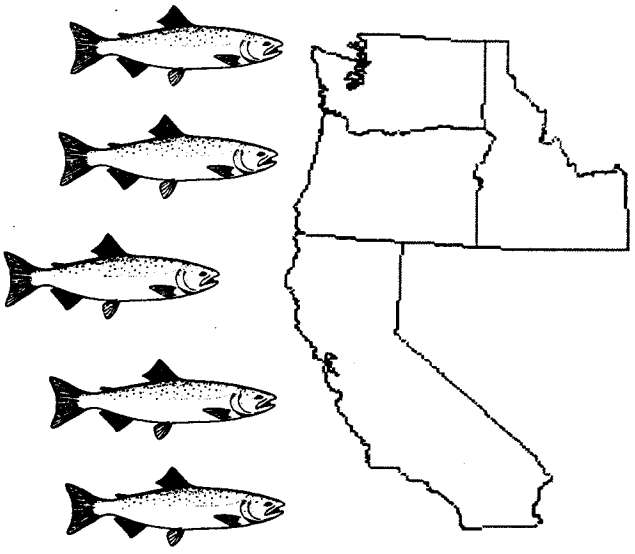
PRESEASON REPORT III

ANALYSIS OF COUNCIL ADOPTED MANAGEMENT MEASURES FOR 2001 OCEAN SALMON FISHERIES

PREPARED BY THE
SALMON TECHNICAL TEAM AND COUNCIL STAFF

AND ENVIRONMENTAL ASSESSMENT



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LIST OF ACRONYMS AND ABBREVIATIONS

AEQ	Adult equivalent exploitation rate
CDFG	California Department of Fish and Game
Council	Pacific Fishery Management Council
CWT	coded-wire tag
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESA	Endangered Species Act
ESU	evolutionarily significant unit
FMP	fishery management plan
FR	*Federal Register*
FRAM	Fishery Regulation Assessment Model
KFMC	Klamath Fishery Management Council
KMZ	Klamath management zone (for the adopted 2000 management measures this would be the ocean zone between Humbug Mountain and Horse Mountain where management emphasis is on Klamath River fall chinook)
KOHM	Klamath River Ocean Harvest Model
LRH	lower river hatchery (tule fall chinook returning to hatcheries below Bonneville Dam)
MCB	Mid-Columbia River brights (hatchery bright fall chinook released in the mid-Columbia River)
MSP	Maximum sustainable production
MSY	Maximum sustainable yield
NMFS	National Marine Fisheries Service
NOAA	National Oceanic and Atmospheric Administration
ODFW	Oregon Department of Fish and Wildlife
OCN	Oregon coastal natural (coho)
PFMC	Pacific Fishery Management Council
PSC	Pacific Salmon Commission
PST	Pacific Salmon Treaty
RK	Rogue/Klamath (hatchery coho)
SCH	Spring Creek Hatchery (tule fall chinook returning to Spring Creek Hatchery)
SAS	Salmon Advisory Subpanel
SOC	South of Pt. Arena, California, fishery impact cell of the KOHM
SRFI	Snake River fall (chinook) index
STT	Salmon Technical Team
URB	upper river brights (bright fall chinook normally migrating past McNary Dam)
WCVI	West Coast Vancouver Island
WDFW	Washington Department of Fish and Wildlife

INTRODUCTION

This is the last in a series of three preseason reports prepared by the Pacific Fishery Management Council's Salmon Technical Team (STT) and staff. The reports document and help guide salmon fishery management in the exclusive economic zone from 3 to 200 nautical miles off the coasts of Washington, Oregon and California, and within state territorial waters. This report analyzes the impacts of the 2001 ocean salmon fishery management measures adopted by the Council for submission to the Secretary of Commerce. A biological evaluation of expected impacts on stocks listed or proposed for listing under the Endangered Species Act (ESA) is included in Appendix A. An environmental impact assessment of the proposed management measures is also appended to the report.

ADOPTED MANAGEMENT MEASURES

The Council's recommendations for the 2001 ocean salmon fishery regulations meet the objectives of the *Pacific Coast Salmon Plan* and meet or exceed the level of protection required by all consultation standards for salmon species listed under the Endangered Species Act (ESA). The following figures and tables describe the 2001 Council-adopted management measures:

Table 1 - non-Indian commercial management measures, pages 8-11:
Figure 1 - geographic outline of commercial troll (non-Indian) ocean salmon seasons, page 12;
Figure 2 - description of Cape Flattery Control Zone for commercial fisheries, page 13;
Figure 3 - description of Columbia Control Zone for commercial and recreational fisheries, page 14;
Table 2 - recreational management measures, pages 15-17;
Figure 4 - geographic outline of recreational salmon seasons, page 18;
Table 3 - treaty Indian commercial management measures, page 19; and
Table 4 - allowable catch quotas for chinook and coho, page 20.

In addition, Tables 5, 6, and 7 provide information on the biological impacts of the Council's management recommendations and landing estimates. Table 8 displays the expected mark rate for coho encountered in mark-selective fisheries (healed adipose fin clip). Tables 9 and 10, and Figures 4 and 5 provide information on the economic impacts of the proposed fisheries.

The 2001 seasons are constrained primarily by: low abundance of naturally produced coho salmon over the entire Council management area, including natural coho stocks produced in Oregon and California coastal streams that are listed under the ESA; low abundance of lower Columbia River hatchery fall chinook; endangered Sacramento River winter chinook south of Point Arena, California; and threatened Puget Sound chinook off northern Washington. Constraints for Snake River fall chinook have not become a limiting factor in 2001, primarily because of continued reductions in Canadian fisheries. Both recreational and commercial troll coho retention fisheries are again made possible through a projected abundance of Oregon production index hatchery coho that is the highest since 1986, and the use of selective fisheries for coho with healed adipose fin clips (marked hatchery coho). The 2001 season provides the Council's third year of extensive selective fisheries for marked hatchery coho.

Regulations and expected fishing patterns for the treaty-Indian troll fisheries were developed by the Hoh, S'Klallam, Makah, Quileute, and Quinault tribes for their respective fisheries. The Council recommendations provide for continuation of an encounter rate study in a fishery to be conducted by the Makah Tribe in the Cape Flattery area. The purpose of the study is to estimate encounter rates of chinook and coho salmon during troll fisheries directed at each species. All fish with clipped adipose fins will be retained and fish that are taken during periods when the treaty troll fishery is operating will be counted towards the treaty troll quota.

INSEASON MANAGEMENT

Some management measures may be modified through inseason action by National Marine Fisheries Service (NMFS) after consultation with the Council Chair, affected management agencies, and pertinent tribes and public (e.g., changing the days or number of days of recreational fishing allowed per calendar week; or modifying open areas, quotas, bag limits, and species retention limits). Inseason changes must meet the Council's salmon fishery management plan (FMP) goals, especially in regard to conservation and allocation goals, and federally-recognized Indian fishing rights.

It is anticipated that the Oregon Department of Fish and Wildlife (ODFW) will permit late-season, chinook-only fisheries in certain areas within state waters in addition to the seasons shown in Tables 1 and 2. Potential seasons include commercial and recreational fisheries at the mouths of the Chetco and Elk Rivers, and at the mouth of Tillamook Bay. The State of Washington may also establish limited recreational fisheries in state waters if they avoid additional impacts on critical coho and/or chinook stocks.

Council intent generally advocates that state-water fisheries have the same basic regulations as adjacent Federal waters, particularly if open simultaneously. However, the Oregon state-water fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.

NEW MANAGEMENT MEASURES

Off California

Commercial Measures

For 2001 the predicted increased abundance of Columbia River hatchery coho and Klamath River fall chinook stocks have allowed for a 3,000 chinook quota fishery in Fort Bragg during May. May fishing in this area has not been allowed since 1993 when there was a six day fishery inside three nautical miles of shore. There is also increased fishing time between Point Arena and Point Reyes during part of June and all of July. For the first time there will be an October fishery between Point Reyes and Point San Pedro.

Recreational Measures

In the area between Horse Mountain and Point Arena, the minimum size limit is 24 inches through May 31 and 20 inches thereafter. In the area south of Point Arena, the minimum size limit is 24 inches through June 30 and 20 inches thereafter. For the first time since 1993, the fishing season from Horse Mountain to Point Arena is open during all of July. The KMZ sport fishery has a split season, with a two-fish bag limit; the first half of the season has a 4 fish in 7 consecutive days possession limit, and the second half has a limit of 6 fish in 7 consecutive days.

Continuation and Expansion of Mark-Selective Coho Fisheries off Washington and Oregon

Until recently, adipose fin clips (the adipose fin is the small fleshy fin on the back of the fish just ahead of the tail) have been used exclusively to mark fish that contain coded-wire tags. This mark is now used to provide a way of harvesting hatchery stocks while reducing impacts on wild fish. The mark-selective fisheries will be extensively monitored by the state fishery agencies to evaluate their performance as a management tool.

As in 2000, the all-salmon recreational fisheries off Washington and Oregon, as far south as Humbug Mountain (Port Orford), are selective for coho with healed adipose fin clips. Retention of coho in the non-Indian, all-salmon commercial troll fishery north of Cape Falcon is restricted to coho with a healed adipose fin clip. The implementation of mark-selective restrictions began in the 1998 recreational season at the mouth of the Columbia River and was expanded in 1999 to all recreational fisheries north of Cape Falcon and to a limited, all-salmon season in the recreational fishery off central Oregon. Implementation of mark-selective restrictions in the non-Indian troll fishery north of Cape Falcon began in 2000.

Additional New Measures North of Cape Falcon

Commercial Measures

To protect threatened Puget Sound chinook stocks, the Cape Flattery Control Zone is in effect during all non-Indian troll fisheries. Further protection is provided by capping the number of chinook allowed to be caught north of the Queets River. The Columbia River Control Zone, modified to be identical to the recreational control zone, is closed during these fisheries.

Recreational Measures

North of Cape Falcon, the recreational fisheries are all restricted to no more than one chinook in the daily bag limit. This limitation will help ensure full prosecution of the mark-selective coho fishery under the relatively low chinook allowance required to meet management objectives for Columbia River chinook. Constraints on chinook harvests in the northern areas are intended to help protect ESA-threatened Puget Sound chinook stocks. Further protection is provided by prohibiting retention of chinook in Area 4B while the ocean fishery is open in Area 4 (Neah Bay area outside the Bonilla-Tatoosh line and north of Cape Alava). Retention of coho is prohibited from Tillamook Head to Cape Falcon, beginning August 1, to reduce impacts on the northern component of threatened Oregon coastal natural (OCN) coho.

ESTIMATED SALMON STOCK IMPACTS OF ADOPTED MANAGEMENT MEASURES

Procedures and assumptions employed in the evaluation of regulatory impacts are reviewed and maintained by the STT. In modeling non-retention and mark-selective fishery impacts, the Council has adopted hook-and-release mortality rates of 26% for the commercial fishery; 14% for recreational fishery north of Point Arena, California; and an average of 28.1% for mooching and trolling gears combined in the recreational fishery south of Point Arena. In addition, a drop-off mortality impact is applied which is generally 5% of the landed catch or estimated encounters for non-retention fisheries. The hook-and-release mortality rate of 14% in the recreational fishery north of Point Arena was adopted in 2000 and is the result of a comprehensive review by the STT. The rate used from 1995 through 1999 was 8%.[1/]

CHINOOK SALMON ASSESSMENT

Ocean chinook harvest quotas are summarized in Table 4. Table 5 lists expected ocean spawner escapements and other key chinook management criteria, including allocation of Klamath River fall chinook and data relevant to meeting consultation standards for ESA listed stocks. Expected ocean harvest and incidental non-retention mortality are provided in Table 6. Further details of fishery impacts on stocks listed under the ESA are provided in Appendix A.

South of Cape Falcon

Considerations in shaping the chinook fisheries in this area include the protection of the endangered Sacramento River winter chinook, and threatened California Coastal chinook and Snake River fall chinook stocks (see Appendix A); achievement of the fall chinook spawner escapement goals for the Klamath, Sacramento, and Oregon coastal rivers; and non-retention and mark-selective fishery impacts on threatened Oregon and California natural coho stocks (as monitored through OCN and Rogue/Klamath (RK) hatchery coho stocks).

1/ STT. 2000. Recommendations for hooking mortality rates in 2000 recreational ocean chinook and coho fisheries (STT Report B.2. at the March 2000 Council meeting).

U.S.-Mexico Border to Horse Mountain

Central Valley (primarily Sacramento River) fall chinook is the Council's primary management unit in this area. Under the adopted management measures, the projected spawning escapement for Sacramento River fall chinook is 195,100 adult fish, compared to the 2000 spawner escapement of 428,300 adults, and a spawner escapement goal range of 122,000 to 180,000 hatchery and natural fall chinook adults combined. Ocean commercial and recreational fisheries in this area are expected to land 330,200 and 115,800 chinook, respectively. The expected harvest level for the commercial season is 77% of that observed in 2000, while the expected recreational catch represents 69% of the 2000 observation.

Delays in the recreatonal season opening dates south of Point Arena, and the 24-inch minimum size prior to July 1 have been used to help limit impacts of recreational ocean salmon fisheries on endangered Sacramento River winter chinook. Season shaping in the commercial fishery for 2001 is heavily influenced by limits for endangered Sacramento River winter chinook and a cap on the age-4 ocean harvest rate on Klamath River fall chinook, which serves as the ESA consultation standard for threatened California coastal chinook. These two constraints prevent ocean fisheries from fully harvesting available Sacramento River fall chinook and this year's unusually high abundance of age-4 Klamath River fall chinook.

Horse Mountain to Humbug Mountain

This area is designated as the Klamath management zone (KMZ) because the primary stock of concern is Klamath River fall chinook. The ocean escapement of Klamath River fall chinook in 2001 is projected to be 187,100 adults. After inriver tribal and recreational fishery impacts, the total number of spawners is expected to be 74,700 adults, of which 47,000 adults would be natural spawners.

Management constraints for Klamath River fall chinook usually affect the shaping of many fisheries from central Oregon to central California, as well as inside tribal and recreational fisheries. Therefore, the Council, with assistance from the Klamath Fishery Management Council (KFMC), identifies several specific harvest allocation objectives for this stock. The Council's proposed regulations allocate:

- 50% (75,500 fish) of the available Klamath River fall chinook harvest to the Indian tribes of the Klamath-Trinity River Basin with federally recognized fishing rights (Yurok and Hoopa Valley tribes);
- 60.5% (45,600 fish) of the non-Indian harvest of Klamath River fall chinook to the ocean fishery;
- 39.5% (29,800 fish) of the non-Indian harvest of Klamath River fall chinook to the Klamath River recreational fishery; and
- 17% (7,700 fish) of the ocean allocation for the KMZ ocean recreational fishery.

The Council's recommendations result in a projected California/Oregon sharing of Klamath River age-4 fall chinook ocean harvest outside of the KMZ sport fishery of 55%/45%, respectively. This California/Oregon split is the result of several constraints peculiar to the 2001 season and is not intended to represent a Council allocation directive or to apply in future years.

Ocean commercial and recreational fisheries in the KMZ are expected to land a total of 15,400 and 25,700 chinook (of all stocks), respectively. The recreational prediction is close to the estimated catch in 2000; however, the commercial prediction is roughly three times the 2000 reported landings.

Humbug Mountain to Cape Falcon

The primary chinook stocks of concern for this area originate in northern California and Oregon coastal river systems. Sacramento River fall chinook also contribute significantly to the harvest. The chinook spawner escapement goal for all Oregon coastal chinook stocks combined (south of the Columbia River) is a range of 150,000 to 200,000 natural adult spawners. The ocean escapement of these stocks in 2001 is expected to be sufficient to provide for inside fisheries and meet the spawner escapement goal.

Chinook impacts in this area primarily relate to the commercial fishery as recreational fishing effort has traditionally focused on coho seasons, which were closed beginning in 1994, and have been opened to limited selective harvest of hatchery coho since 1999. For 2001, the commercial chinook fishery opens April 1 and proceeds through October 31 with closed periods in July and August. The purpose of the eight-day closure in July is to reduce incidental non-retention mortality for OCN coho and to achieve harvest constraints on Klamath River fall chinook as a surrogate protective measure for California coastal chinook. The closure of two days at the end of August assists in accurately accounting for Klamath River fall chinook impacts occurring prior to September 1. After August, most mature fish are no longer available to ocean fisheries and impacts at that time primarily affect ocean escapement in the following year. Ocean harvests after September 1 are counted against the allowable harvest for the following year. As in recent years, commercial troll gear restrictions have also been recommended to reduce coho impacts (see Table 1).

Ocean commercial and recreational fisheries in this area are expected to land 147,400 and 6,300 chinook, respectively (Table 6). The preseason expectations for the 2001 commercial fishery are similar to expected and observed catch in 2000. Preseason expectations for the recreational fisheries are improved over the 2000 preseason expectation, but below the 2000 observed catch.

North of Cape Falcon

Management objectives for chinook fisheries in this area are to satisfy standards for ESA-listed stocks, and to the extent possible, provide for viable ocean and inriver fisheries while protecting depressed Columbia River natural stocks and meeting hatchery fall chinook brood stock needs. Lower Columbia River and Bonneville Pool hatchery fall chinook have historically been the major contributors to ocean fishery catches in the Council area north of Cape Falcon. Council-area fisheries were structured to reduce impacts on Puget Sound chinook, listed as threatened under the Federal ESA, by constraining catches in areas of highest concentration (see Appendix A).

Management constraints for ESA-listed stocks, especially OCN coho, and low abundance levels of lower Columbia River hatchery chinook constrain ocean fisheries in this area. Ocean escapements of lower Columbia River hatchery, Spring Creek Hatchery, Lewis River wild, upper Columbia River brights, and upper Columbia River summer stocks are presented in Table 5 along with impacts expected relative to standards established for ESA-listed stocks. Spawner escapement objectives or NMFS consultation standards for ESA-listed stocks are expected to be met.

Changes in regulations for 2001 include the following: the Cape Flattery Control Zone will be closed during the non-Indian commercial troll fishery, and the recreational fishery is closed between Tillamook Head and Cape Falcon beginning August 1.

The ocean non-Indian commercial troll and recreational quotas in this area provide for landings of 30,000 chinook in each fishery, about twice the actual chinook landings in 2000. The 2001 treaty-Indian troll quota is 37,000 compared to 25,500 in 2000. The coho quotas are 75,000, 225,000, and 90,000 in the non-Indian troll, recreational, and treaty-Indian troll fisheries, respectively, representing substantial increases from 2000 (Table 6).

The treaty-Indian commercial troll fishery is expected to land its quota of 37,000 chinook in ocean management areas and Area 4B combined (Table 3). The landings result from a chinook-directed fishery in May and June (under a quota of 18,500 chinook) and the all-salmon season beginning in July with a 18,500 chinook quota. There is no roll-over of any chinook that are not harvested during the May-June chinook-directed fishery. The expected 2001 harvest would be an increase from the 2000 quota level of 25,500 and the 2000 observed harvest of 7,600 (Table 6).

COHO SALMON ASSESSMENT

Ocean coho harvest quotas are summarized in Table 4. Table 5 lists expected ocean spawner escapements and other key coho management criteria, including data relevant to meeting consultation standards for ESA listed stocks. Expected coho harvest and incidental non-retention mortality are provided in Table 6. Table 7 provides a detailed accounting of impacts on OCN and RK coho by fishery. Further details of the fishery impacts on stocks listed under the ESA are provided in Appendix A. Table 8 provides estimates of the percentage of marked coho encountered in the mark-selective fisheries.

South of Cape Falcon

All natural coho stocks produced south of Cape Falcon are listed under the ESA. Allowable coho harvest impacts in this area are based on meeting NMFS ESA consultation standards for three separate evolutionarily significant units (ESUs) of threatened natural Oregon and California coastal coho (see Appendix A). NMFS guidance requires that the three northern OCN coho stock components be managed in accordance with Amendment 13 to the salmon FMP (i.e., for 2001, an exploitation rate in marine and freshwater fisheries combined of 15% or less). Additionally, the OCN Coho Work Group recommended a combined marine/freshwater exploitation rate of 0-8% on OCN coho based on its review of Amendment 13 (accepted by the Council as expert biological advice at the November, 2000 Council meeting). For the southern OCN and northern California coastal coho components, NMFS guidance required limiting harvest impacts in marine waters to 13% or less, as measured by impacts on RK hatchery coho stocks.

Under the adopted recommendations, the combined marine and freshwater OCN coho exploitation rate is projected to be 7.4%, below the 8.0% limit recommended by the OCN Coho Work Group and the 15% under Amendment 13. The marine exploitation rate for RK hatchery coho is projected to be 3% (Table 7). The number of OCN coho spawners in 2001 is projected to be 44,000 adults based on the stratified random survey (SRS) method of accounting. This compares with 76,600 adults observed in 2000. At present, there are no preseason spawner projections for either southern Oregon/northern California or central California natural coho stock ESUs. Ocean escapement of the early and late hatchery stocks of Columbia River coho are expected to be more than sufficient to meet hatchery egg-take goals (Table 5).

The south of Cape Falcon ocean fishery is structured primarily to minimize OCN coho impacts while utilizing harvestable chinook and hatchery coho stocks. To allow greater harvest of abundant chinook stocks, coho retention is prohibited for the commercial troll and recreational fisheries in this area, except for a mark-selective recreational fishery for up to 55,000 coho with healed adipose fin clips between Cape Falcon and Humbug Mountain open June 22 through July 31. In 2000, the mark-selective fishery was limited to 20,000 coho with healed adipose fin clips and the actual harvest was 19,500 marked coho.

In addition to the 55,000 marked coho harvest in the recreational fishery, the estimated non-retention (drop-off plus hook-and-release) mortality for non-Indian ocean commercial and recreational fisheries in the area south of Cape Falcon is 27,900 and 12,900 coho, respectively (Table 6). Relative to 2000 preseason projections, the 2001 selective harvest and nonretention fisheries south of Cape Falcon represent similar commercial and modestly increased recreational fishery impacts on OCN coho. However, for all fisheries combined, 2001 impacts on OCN coho are lower than in 2000.

North of Cape Falcon

Coho fisheries north of Cape Falcon are constrained by management objectives and treaty-Indian obligations for individual stock management units. Ocean escapements for the pertinent coho stocks under the proposed regulations are presented in Table 5. Ocean escapement levels for all natural coho stocks are expected to meet or exceed their long-term spawner escapement goals. The actual spawner escapements will be determined by the combined impact of ocean and inside fisheries. Annual management objectives for these stocks for 2001 have been agreed to by state and tribal co-managers under the terms of pertinent U.S. District Court orders. Ocean escapements of early and late Columbia River hatchery stocks are projected to be sufficient to meet normal egg-take goals, treaty Indian obligations, and to allow some harvest opportunity in non-Indian fisheries.

For 2001, coho retention in all non-Indian troll and recreational ocean fisheries north of Cape Falcon is limited to fish with healed adipose fin clips. Coho quotas of 75,000 and 225,000 fish with healed adipose fin clips have been established for the non-Indian commercial troll and recreational fisheries, respectively. The total allowable harvest by the non-Indian commercial troll and recreational fisheries for 2001 is three times greater than the level allowed under 2000 regulations.

SOCIOECONOMIC IMPACTS OF PROPOSED REGULATIONS

This section provides economic impact estimates for expected non-Indian fishing activities under the Council's proposed ocean commercial and recreational fishery regulations. Economic costs and benefits associated with changes in levels of ocean escapement (costs and benefits of spawner escapement and inside harvest) are not included. No attempt is made to estimate the economic value of the treaty-Indian commercial catch, although these landings do generate personal income for the local and state economies. The procedures and methods used to analyze the economic impacts follow those documented in previous recent preseason reports and the annual reviews of ocean salmon fisheries.

The economic effects of the proposed options for non-Indian fisheries are shown in Tables 9 and 10. Table 9 shows troll impacts expressed in terms of estimates of potential exvessel value and Table 10 shows recreational impacts in terms of trips generated and coastal community personal income expected to be associated with the recreational fishery under each option. The exvessel values provided for the troll fishery options in Table 9 and income impact values provided for the recreational fishery options in Table 10 are not directly comparable.

Figures 5 and 6 show estimated coastal community income impacts for both the troll and recreational options compared to historic impacts in real (inflation adjusted) dollars.

TABLE 1. Council adopted **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2001. (Page 1 of 4)

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

- Overall allowable non-Indian catch north of Cape Falcon: 60,000 chinook; 300,000 coho.
- Total allowable commercial catch apportioned in the three fisheries below (no preseason trade): 30,000 chinook and 75,000 coho.

U.S.-Canada Border to Cape Falcon

May 1 thru earlier of June 30 or 17,000 chinook guideline (see C.7.a). All salmon except coho. No more than 4 spreads per line beginning June 1 (see gear restrictions in C.2). Cape Flattery and Columbia Control Zones closed (C.4.a and C.4.b). The 17,000 chinook guideline includes a subarea guideline of 12,000 chinook for the area between the U.S.-Canada border and the Queets River. State regulations require that fishers fishing within the U.S. Canada Border to Queets River subarea and intending to land their catch outside of this subarea notify WDFW before they leave the subarea. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. Inseason actions may modify harvest guidelines in later fisheries to achieve or prevent exceeding the overall allowable troll harvest impacts (see C.7.a).

U.S.-Canada Border to Leadbetter Pt.

July 1 thru earliest of July 27 or 7,000 chinook preseason guideline (see C.7.a) or 12,000 marked coho guideline. All salmon (all retained coho must have a healed adipose fin clip). The 7,000 chinook guideline includes a subarea guideline of 4,000 chinook for the area between the U.S.-Canada border and the Queets River. Gear restricted to plugs 6 inches or longer; no more than 4 spreads per line plus 1 flasher w/o hooks (see also C.2). Cape Flattery Control Zone closed (C.4.a). Trip limits, gear restrictions, and guidelines may be implemented or adjusted inseason. Fishery is continuous until 75% of either guideline is caught then reverts to 4 days open/3 days closed. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. State regulations require that fishers fishing within the U.S. Canada Border to Queets River subarea and intending to land their catch outside of this subarea notify WDFW before they leave the subarea.

Leadbetter Point to Cape Falcon

July 20 through July 27. Catch in this fishery will be assessed against the 6,000 chinook and 63,000 marked coho guidelines in the Queets River to Cape Falcon fishery (below). All salmon (all retained coho must have a healed adipose fin clip). See gear restrictions in C.2. Trip limits, gear restrictions, and guidelines (see C.7.a) may be instituted or adjusted inseason. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. Columbia River Control Zone is closed (C.4.b).

Queets River to Cape Falcon

The earlier of the day following closure of the U.S.-Canada Border to Leadbetter Pt. July troll fishery or July 28, but not before July 20, thru earliest of Sept. 30 or the overall chinook quota (preseason 6,000 chinook guideline; see C.7.a.) or 63,000 marked coho guideline. All salmon (all retained coho must have a healed adipose fin clip). See gear restrictions in C.2. Fishery continuous until 75% of either guideline caught, then reverts to a cycle of 4 days open/3 days closed. Trip limits, gear restrictions, and guidelines may be instituted or adjusted inseason. Vessels must land and deliver their fish within the area or in adjacent areas that are closed to all commercial non-Indian salmon fishing, and within 24 hours of any closure of this fishery. Columbia River Control Zone is closed (C.4.b).

South of Cape Falcon

Cape Falcon to Florence South Jetty

Apr. 1 thru July 18; July 27 thru Aug. 29; and Sept. 1 thru Oct. 31. All salmon except coho. See gear restrictions C.2 and Oregon State regulations for a description of the closed area at the mouth of Tillamook Bay. [**Note:** Incidental retention of halibut is not allowed until May 1.]

TABLE 1. Council adopted **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2001. (Page 2 of 4)

A. SEASON DESCRIPTION (Continued)

Florence South Jetty to Humbug Mt.

April 1 thru July 9; July 18 thru Aug. 29; and Sept. 1 thru Oct. 31. All salmon except coho. See gear restrictions in C.2.

Humbug Mt. to OR-CA Border

May 1 thru May 31. All salmon except coho. See gear restriction C.2.

June 3 thru earlier of June 30 or 1,500 chinook. All salmon except coho. Fishery follows a cycle of 2 days open/2 days closed (may be adjusted inseason to match management needs). Possession and landing limit of 30 fish per day. See gear restrictions C.2. All salmon must be landed and delivered to Gold Beach, Port Orford, or Brookings within 24 hours of closure.

Aug. 1 thru earlier of Aug. 31 or 3,000 chinook quota. All salmon except coho. Possession and landing limit of 30 fish per day. See gear restrictions C.2. All salmon must be landed and delivered to Gold Beach, Port Orford, or Brookings within 24 hours of closure.

Humbug Mt., OR to Humboldt South Jetty

Sept. 1 through earlier of Sept. 30 or 8,000 chinook quota. All salmon except coho. Possession and landing limit of 30 fish per day. All fish caught in this area must be landed within the area. See gear restrictions in C.2. Klamath Control Zone closed (C.4.). The 8,000 chinook quota includes a harvest guideline limiting the combined landings at the ports of Gold Beach, Port Orford, and Brookings to no more than 2,000 chinook. If this guideline is reached prior to the overall quota, the fishery will close north of the Oregon-California border. When the fishery is closed north of the Oregon-California border and open to the south, Oregon State regulations provide for the following action: Vessels with fish on board caught in the open area off California may seek temporary mooring in Brookings, Oregon, prior to landing in California only if such vessels first notify the Chetco River Coast Guard Station via VHF channel 22A between the hours of 0500 and 2200 and provide the vessel name, number of fish on board, and estimated time of arrival.

Horse Mt. to Pt. Arena (Fort Bragg)

May 1 thru earlier of May 31 or 3,000 chinook quota. All salmon except coho. All fish caught in this area must be landed within the area. Minimum size 26 inches. See gear restrictions in C.2.

Sept. 1 thru Sept. 30. All salmon except coho. Minimum size 26 inches. See gear restrictions in C.2.

Pt. Arena to Pt. Reyes (Bodega Bay)

June 24 thru Sept. 30. All salmon except coho. Minimum size limit 26 inches thru June 30 and 27 inches thereafter. See gear restrictions in C.2.

Pt. Reyes to Pt. San Pedro

May 24 thru Sept. 30. All salmon except coho. Minimum size 26 inches thru June 30 and 27 inches thereafter. See gear restrictions in C.2.

Mon. thru Fri. Oct. 1 thru Oct. 12. All salmon except coho. Minimum size 27 inches. See gear restrictions in C.2.

Pt. San Pedro to Pt. Sur

May 1 thru Aug. 14. All salmon except coho. Minimum size limit 26 inches thru June 30 and 27 inches thereafter. See gear restrictions in C.2.

Pt. Sur to U.S.-Mexico Border

May 1 thru Aug. 14 and Sept. 11 thru Sept. 30. All salmon except coho. Minimum size 26 inches thru June 30 and 27 inches thereafter. See gear restrictions C.2.

In 2002, Council to consider opening a fishery from Apr. 15-30 south of Pt. Sur (see C.7.b).

TABLE 1. Council adopted **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2001. (Page 3 of 4)

B. MINIMUM SIZE (Inches)

Area (when open)	Chinook		Coho		Pink
	Total Length	Head-off	Total Length	Head-off	
North of Cape Falcon	28.0	21.5	16.0	12.0	None
Cape Falcon to Pt. Arena	26.0[a/]	19.5[a/]	-	-	None
South of Pt. Arena prior to July 1	26.0[a/]	19.5[a/]	-	-	None
South of Pt. Arena after June 30	27.0[a/]	20.25[a/]	-	-	None

a/ Chinook not less than 26 inches (19.5 inches head-off) taken in open seasons south of Cape Falcon may be landed north of Cape Falcon only when the season is closed north of Cape Falcon.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size or Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions:

a. Single point, single shank, barbless hooks are required in all fisheries.

b. *Off Oregon South of Cape Falcon*: No more than 4 spreads are allowed per line.

Spread defined: A single leader connected to an individual lure or bait.

c. *Off California:* No more than 6 lines are allowed per vessel and barbless **circle** hooks are required when fishing with bait by any means other than trolling.

Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle;

Trolling defined: Fishing from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Transit Through Closed Areas with Salmon on Board: It is unlawful for a vessel to have troll or recreational gear in the water while transiting any area closed to salmon fishing while possessing salmon, however, fishing for species other than salmon is not prohibited if the area is open for such species and no salmon are in possession.

C.4. Control Zone Definitions:

a. *Cape Flattery Control Zone (Figure 2)* - The area from Cape Flattery (48°23'00" N lat.) to the northern boundary of the U.S. EEZ; and the area from Cape Flattery south to Cape Alava, 48°10'00" N lat. and east of 125° 05'00" W long.

b. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" W. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

TABLE 1. Council adopted **Non-Indian commercial troll** management measures for ocean salmon fisheries, 2001. (Page 4 of 4)

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

c. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.5. Notification When Unsafe Conditions Prevent Compliance with Regulations: If prevented by unsafe weather conditions or mechanical problems from meeting special management area landing restrictions, vessels must notify the U.S. Coast Guard and receive acknowledgment of such notification prior to leaving the area. This notification shall include the name of the vessel, port where delivery will be made, approximate amount of salmon (by species) on board and the estimated time of arrival. This stipulation will be implemented by state regulations for California, Oregon and Washington, as required.

C.6. Incidental Halibut Harvest: During authorized periods, the operator of a vessel that has been issued an incidental halibut harvest license may retain Pacific halibut caught incidentally in Area 2A while trolling for salmon. Halibut retained must be no less than 32 inches in total length (with head on). License applications for incidental harvest must be obtained from the International Pacific Halibut Commission (phone 206-634-1838). Applicants must apply prior to April 1 of each year. Incidental harvest is authorized only during **May and June** troll seasons and after June 30 if quota remains and if announced on the NMFS hotline (phone 800-662-9825). ODFW and WDFW will monitor landings. If the landings are projected to exceed the 34,046 pound preseason allocation or the total Area 2A non-Indian commercial halibut allocation, NMFS will take inseason action to close the incidental halibut fishery.

License holders may land no more than 1 halibut per each 3 chinook, except 1 halibut may be landed without meeting the ratio requirement, and no more than 35 halibut may be landed per trip.

C.7. Inseason Management: In addition to standard inseason actions or modifications already noted under the season description, the following inseason guidance is provided to NMFS:

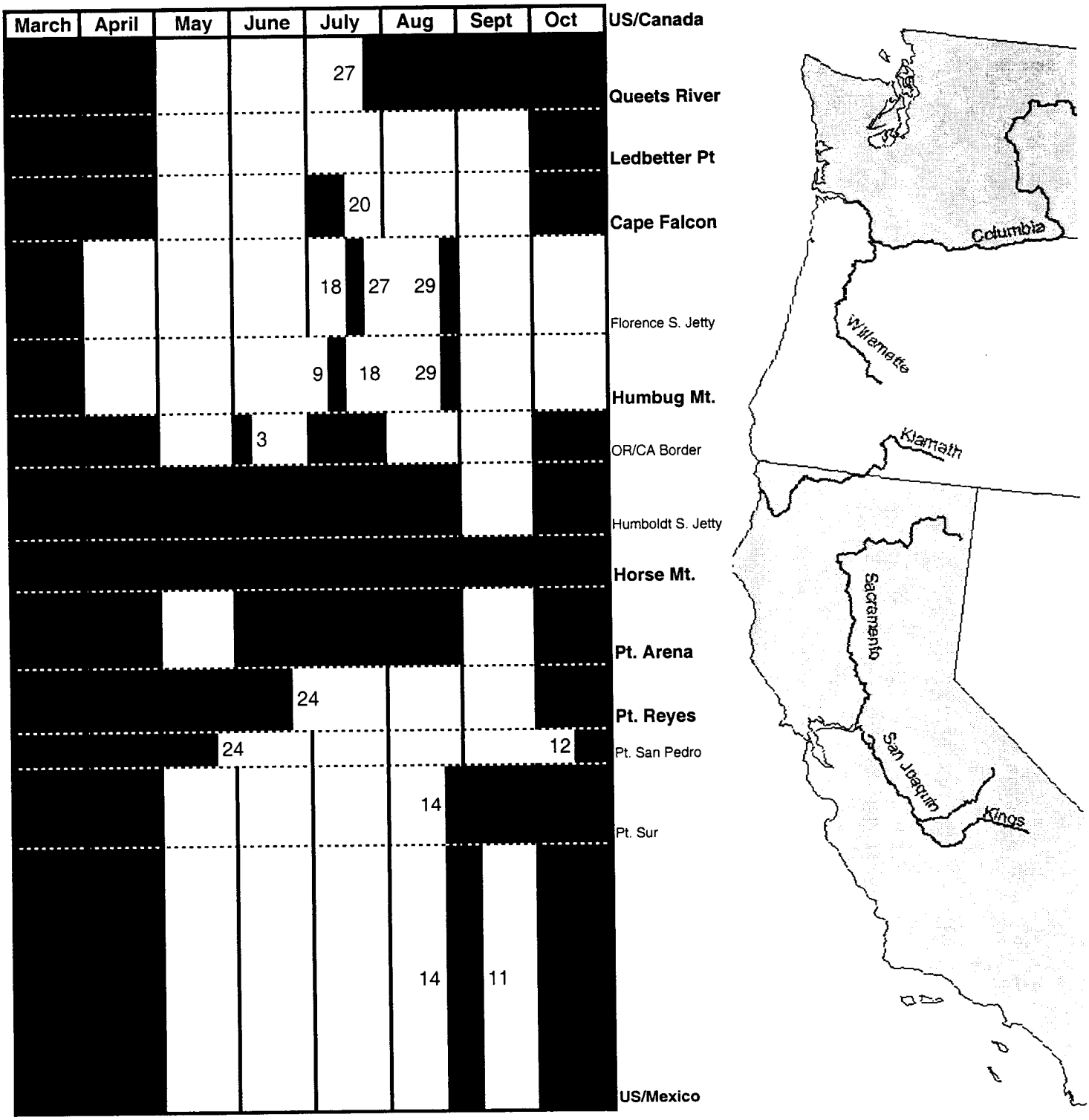
a. In the overall non-Indian commercial chinook quota north of Cape Falcon, 5,000 chinook from the area south of the Queets River in the May/June harvest guideline are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 5,000 chinook (or remaining portion thereof) may be transferred south of the Queets River to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 5,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

b. At the March 2002 meeting, the Council will consider inseason recommendations to: (1) open commercial seasons for all salmon except coho prior to May 1 in areas off Oregon and off California south of Point Sur, and (2) identify the areas, season, quota, and special regulations for any experimental April fisheries (proposals must meet Council protocol and be received by November 2001).

C.8. Consistent with Council management objectives, the State of Oregon may establish additional late-season, chinook-only fisheries in state waters. Check state regulations for details.

C.9. For the purposes of CDFG Code, Section 8232.5, the definition of the KMZ for the ocean salmon season shall be that area from Humbug Mt., Oregon to Horse Mt., California.

FIGURE 1. Non-Indian commercial troll salmon seasons, 2001



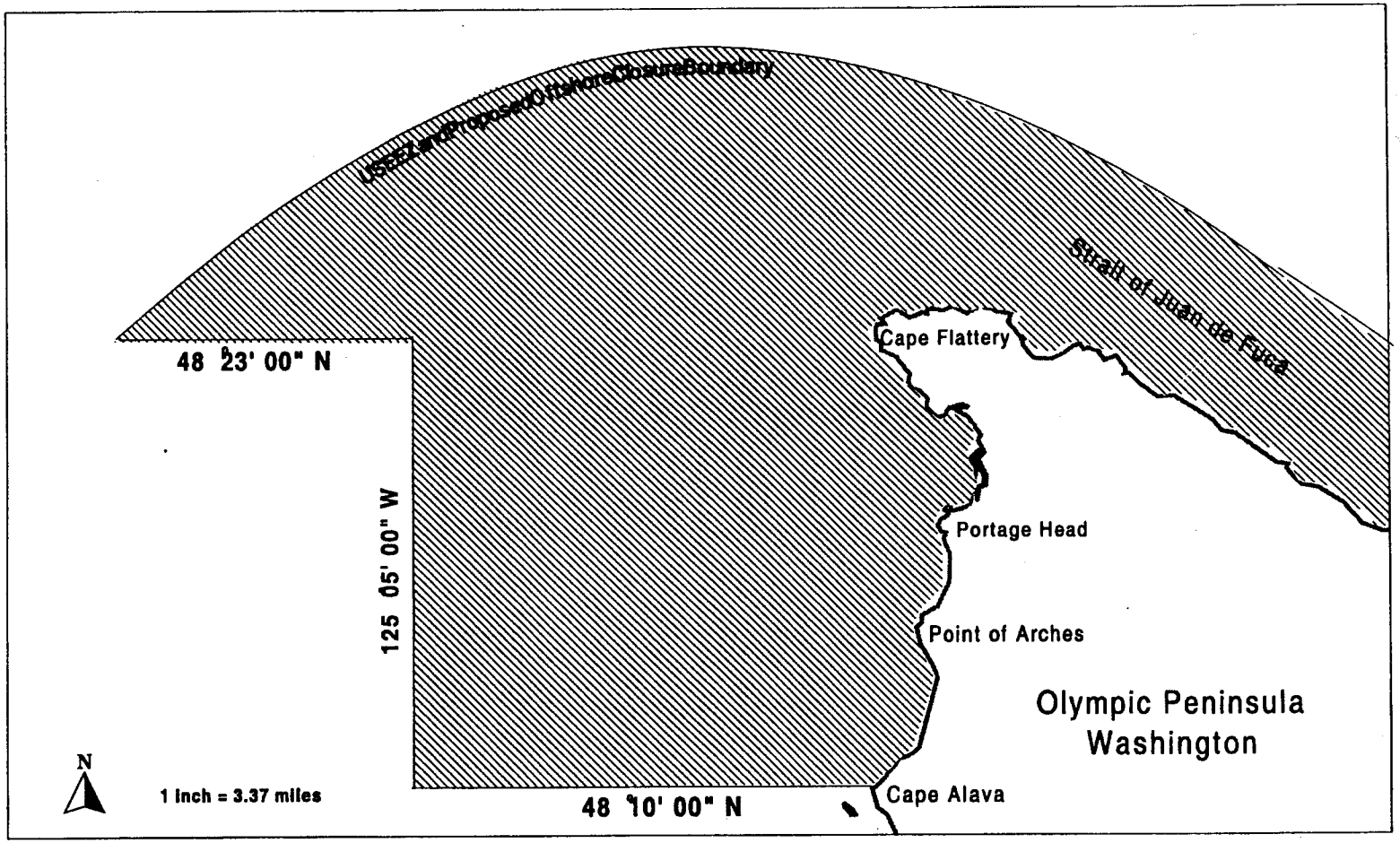


FIGURE 2. Cape Flattery Control Zone.

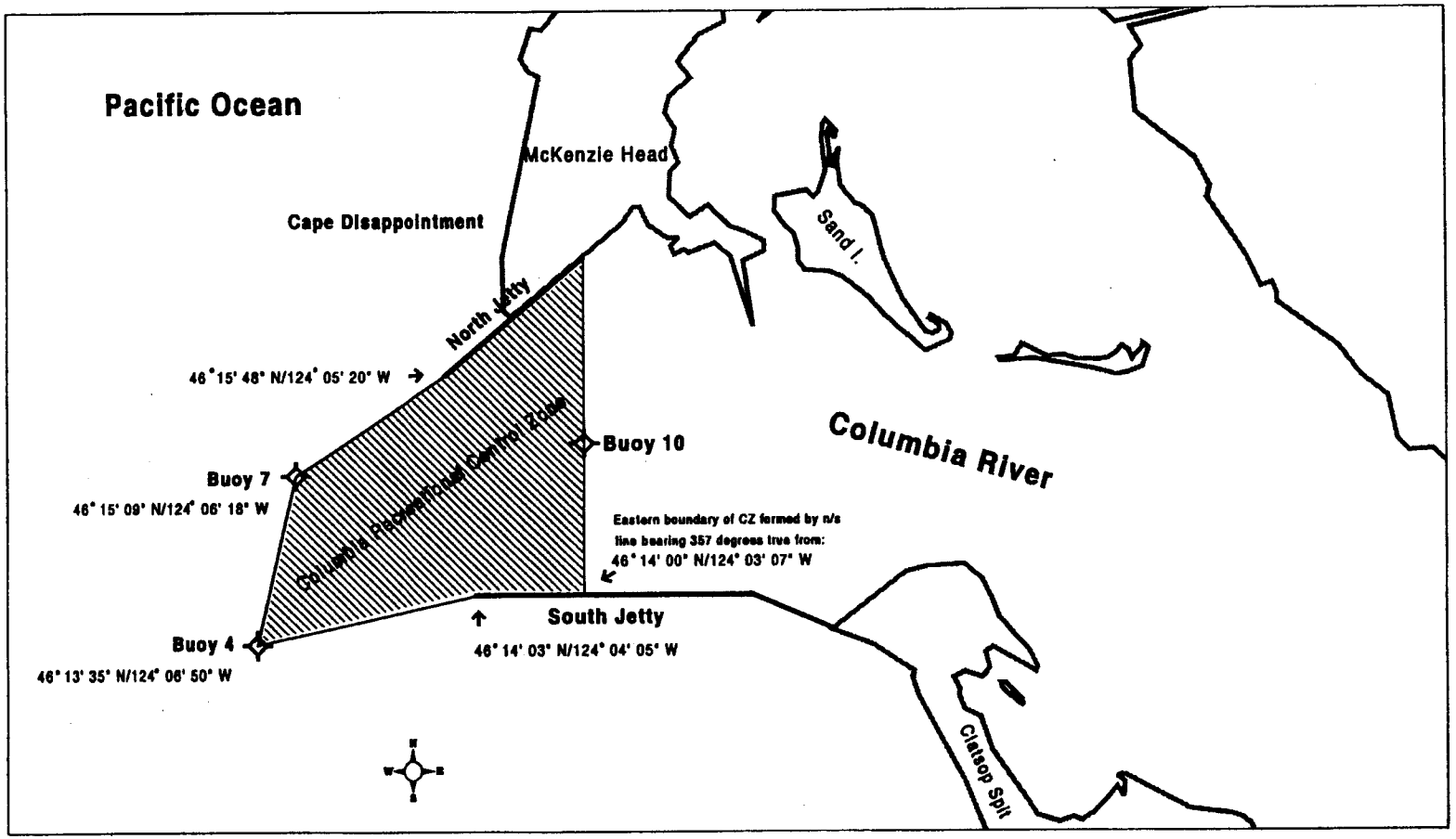


FIGURE 3. Columbia Control Zone.

TABLE 2. Council adopted **Recreational** management measures for ocean salmon fisheries, 2001. (Page 1 of 3)

A. SEASON DESCRIPTION

North of Cape Falcon

Supplementary Management Information:

- Overall allowable non-Indian catch: 60,000 chinook; 300,000 coho marked by a healed adipose fin clip (marked coho). The adipose fin is the small fleshy fin on the back of the fish just ahead of the tail.
- Total allowable recreational catch apportioned in the four fisheries below (no preseason trade): 30,000 chinook and fishery impacts for a landed catch of 225,000 coho with healed adipose fin clips.
- Neah Bay/La Push agreed coho allocation per Amendment 14. No Area 4B add-on fishery.
- Buoy 10 fishery opens Aug. 1 with an expected landed catch of 82,600 marked (healed adipose fin clip) coho in Aug. and 57,400 marked coho in Sept.

U.S.-Canada Border to Cape Alava (Neah Bay Area)

July 1 thru earlier of Sept. 30 or 23,400 coho subarea quota. All salmon (7 days per week), 2 fish per day, but only 1 chinook, and all retained coho must have a healed adipose fin clip. Chinook non-retention in Area 4B unless modified by inseason management. Inseason management (C.4) may be used to sustain season length and keep harvest within a guideline of 1,700 chinook.

Cape Alava to Queets River (La Push Area)

July 1 thru earlier of Sept. 23 or subarea sub-quota of 5,350 coho; Sept. 24 through earlier of Oct. 21 or overall subarea coho quota of 5,850 (500 set-aside). All salmon (7 days per week), 2 fish per day, but only 1 chinook, and all retained coho must have a healed adipose fin clip. Inseason management (C.4) may be used to sustain season length and keep harvest within a guideline of 1,000 chinook for the general season and 100 chinook for the set-aside season.

Queets River to Leadbetter Pt. (Westport Area)

Sun. thru Thurs. July 1 thru earlier of Sept. 30 or 83,250 coho subarea quota. All salmon. 2 fish per day, but only 1 chinook and all retained coho must have a healed adipose fin clip. Inseason management (C.4) may be used to maintain season length and limit harvest within a guideline of 19,450 chinook.

Leadbetter Pt. to Cape Falcon (Columbia River Area)

Sun. thru Thurs. July 1 thru earlier of Sept. 3 or subarea sub-quota of 102,500 coho; Tillamook Head to North Head Lighthouse, 7 days per week, Sept. 4 through earlier of Sept. 30 or overall subarea quota of 112,500 coho (10,000 set-aside). All salmon. 2 fish per day, but only 1 chinook and all retained coho must have a healed adipose fin clip. **Closed** between Tillamook Head and Cape Falcon beginning Aug. 1. Closed in Recreational Columbia Control Zone (C.3.a). Inseason management (C.4) may be used to sustain season length and limit harvest within a guideline of 7,750 chinook.

South of Cape Falcon

Cape Falcon to Humbug Mt.

Except as provided below during the selective fishery, the season will be: Apr. 1 thru Oct. 31; all salmon except coho; 2 fish per day; no more than 6 fish in 7 consecutive days. See gear restrictions in C.2.a and C.2.b. See Oregon State regulations for a description of a closure at the mouth of Tillamook Bay.

Selective fishery for marked hatchery coho:

June 22 thru earlier of July 31 or a landed catch of 55,000 coho. All salmon. 2 fish per day, all retained coho must have a healed adipose fin clip. No more than 6 fish in 7 consecutive days. All salmon except coho season reopens the earlier of Aug. 1 or attainment of the coho quota.

Humbug Mt. to Horse Mt. (Klamath Management Zone)

May 17 thru July 8 and July 24 thru Sept. 3. All salmon except coho. 2 fish per day. From May 17 thru July 8, no more than 4 fish in 7 consecutive days. Beginning July 24, no more than 6 fish in 7 consecutive days. See gear restrictions in C.2. Klamath Control Zone (C.3.b) closed during Aug.

A. SEASON DESCRIPTION (Continued)

South of Cape Falcon (Continued)

Horse Mt. to Pt. Arena (Fort Bragg)
Feb. 17 through Nov. 18. All salmon except coho. 2 fish per day. Minimum size 24 inches thru May 31, and 20 inches thereafter. Gear restrictions include: one rod per angler, no more than 2 barbless hooks, and circle hooks when not trolling (C.2.a, C.2.c and C.2.d).

In 2002, season opens Feb. 16 (nearest Sat. to Feb. 15) for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2001.

Pt. Arena to Pigeon Pt.
Apr. 14 thru Nov. 13. All salmon except coho. 2 fish per day. Minimum size limit 24 inches thru June 30, and 20 inches thereafter. One rod per angler. Gear restrictions include: one rod per angler, no more than 2 barbless hooks, and circle hooks when not trolling (C.2.a, C.2.c and C.2.d).

In 2002, the season will open Apr. 13 for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2001. This opening could be modified to allow an earlier opening date following Council review at its November 2001 meeting.

Pigeon Pt. to U.S.-Mexico Border
Mar. 31 thru Sept. 30. All salmon except coho. 2 fish per day. Minimum size limit 24 inches thru June 30, and 20 inches thereafter. Gear restrictions between Pigeon Point and Point Conception include: one rod per angler, no more than 2 barbless hooks, and circle hooks when not trolling (C.2.a, C.2.c and C.2.d).

In 2002, the season will open Mar. 30 for all salmon except coho. 2 fish per day, 24 inch minimum size limit and the same gear restrictions as in 2001. This opening could be modified to allow an earlier opening date following Council review at its November 2001 meeting.

B. MINIMUM SIZE (Total Length in Inches)

Area (when open)	Chinook	Coho	Pink
North of Cape Falcon	24.0	16.0	None
Cape Falcon to Horse Mt.	20.0	16.0	None, except 20.0 off CA
Horse Mt. To Pt. Arena	20.0[a/]	-	20.0
South of Pt. Arena	20.0[b/]	-	20.0

a/ **Except** 24.0 inches prior to June 1.
b/ **Except** 24.0 inches prior to July 1.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS

C.1. Compliance with Minimum Size and Other Special Restrictions: All salmon on board a vessel must meet the minimum size or other special requirements for the area being fished, and the area in which they are landed if that area is open. Salmon may be landed in an area that is closed only if they meet the minimum size or other special requirements for the area in which they were caught.

C.2. Gear Restrictions: All persons fishing for salmon, and all persons fishing from a boat with salmon on board must meet the gear restrictions listed below for specific areas or seasons.

a. *U.S.-Canada Border to Pt. Conception, California*: No more than one rod may be used per angler and single point, single shank, barbless hooks are required for all fishing gear. **Note:** ODFW regulations in the state-water fishery off Tillamook Bay may allow the use of barbed hooks to be consistent with inside regulations.

C. REQUIREMENTS, DEFINITIONS, RESTRICTIONS, OR EXCEPTIONS (Continued)

b. *Off Oregon between Cape Falcon and Humbug Mt.*:
Apr. 1-30: Anglers are limited to artificial lures and plugs of any size, or bait no less than 6 inches long (excluding hooks and swivels). All gear must have no more than 2 single point, single shank, barbless hooks. Divers are prohibited and flashers may be used only with downriggers.
May 1 thru Oct. 31: No special gear restrictions other than anglers must use no more than 2 single point, single shank, barbless hooks.

c. Off California North of Pt. Conception: Anglers must use no more than 2 single point, single shank, barbless hooks.

d. Off California between Horse Mt. and Pt. Conception: Single point, single shank, barbless **circle** hooks (see circle hook definition below) must be used if angling with bait by any means other than trolling and no more than 2 such hooks shall be used. When angling with 2 hooks, the distance between the hooks must not exceed 5 inches when measured from the top of the eye of the top hook to the inner base of the curve of the lower hook, and both hooks must be permanently tied in place (hard tied). Circle hooks are not required when artificial lures are used without bait.

Circle hook defined: A hook with a generally circular shape and a point which turns inward, pointing directly to the shank at a 90° angle;

Trolling defined: Angling from a boat or floating device that is making way by means of a source of power, other than drifting by means of the prevailing water current or weather conditions.

C.3. Control Zone Definitions:

a. *Columbia Control Zone (Figure 3)* - An area at the Columbia River mouth, bounded on the west by a line running northeast/southwest between the red lighted Buoy #4 (46°13'35" N. Lat., 124°06'50" W. long.) and the green lighted Buoy #7 (46°15'09' N. lat., 124°06'16" W. long.); on the east, by the Buoy #10 line which bears north/south at 357° true from the south jetty at 46°14'00" N. lat.,124°03'07" West. long. to its intersection with the north jetty; on the north, by a line running northeast/southwest between the green lighted Buoy #7 to the tip of the north jetty (46°14'48" N. lat., 124°05'20" W. long.) and then along the north jetty to the point of intersection with the Buoy #10 line; and, on the south, by a line running northeast/southwest between the red lighted Buoy #4 and tip of the south jetty (46°14'03" N. lat., 124°04'05" W. long.), and then along the south jetty to the point of intersection with the Buoy #10 line.

b. *Klamath Control Zone* - The ocean area at the Klamath River mouth bounded on the north by 41°38'48" N. lat. (approximately 6 nautical miles north of the Klamath River mouth); on the west, by 124°23'00" W. long. (approximately 12 nautical miles off shore); and, on the south, by 41°26'48" N. lat. (approximately 6 nautical miles south of the Klamath River mouth).

C.4. Inseason Management: Regulatory modifications may become necessary inseason to meet preseason management objectives such as quotas, harvest guidelines and season duration. Actions could include modifications to bag limits or days open to fishing, and extensions or reductions in areas open to fishing. NMFS may transfer coho inseason among recreational subareas North of Cape Falcon to help meet the recreational season duration objectives (for each subarea) after conferring with representatives of the affected ports and the Salmon Advisory Subpanel recreational representatives north of Cape Falcon.

At the November 2001 meeting the Council will consider recommendation to open seasons for all salmon except coho prior to April 13 in areas off California between Pt. Arena and the U.S.-Mexico border. At the March 2002 meeting, the Council will consider an inseason recommendation to open seasons for all salmon except coho prior to May 1 in areas off Oregon.

C.5. Additional Seasons in State Territorial Waters: Consistent with Council management objectives, the states of Washington and Oregon may establish limited seasons in state waters. Oregon state-water fisheries are limited to chinook salmon. Check state regulations for details.

FIGURE 4. Recreational salmon seasons, 2001.

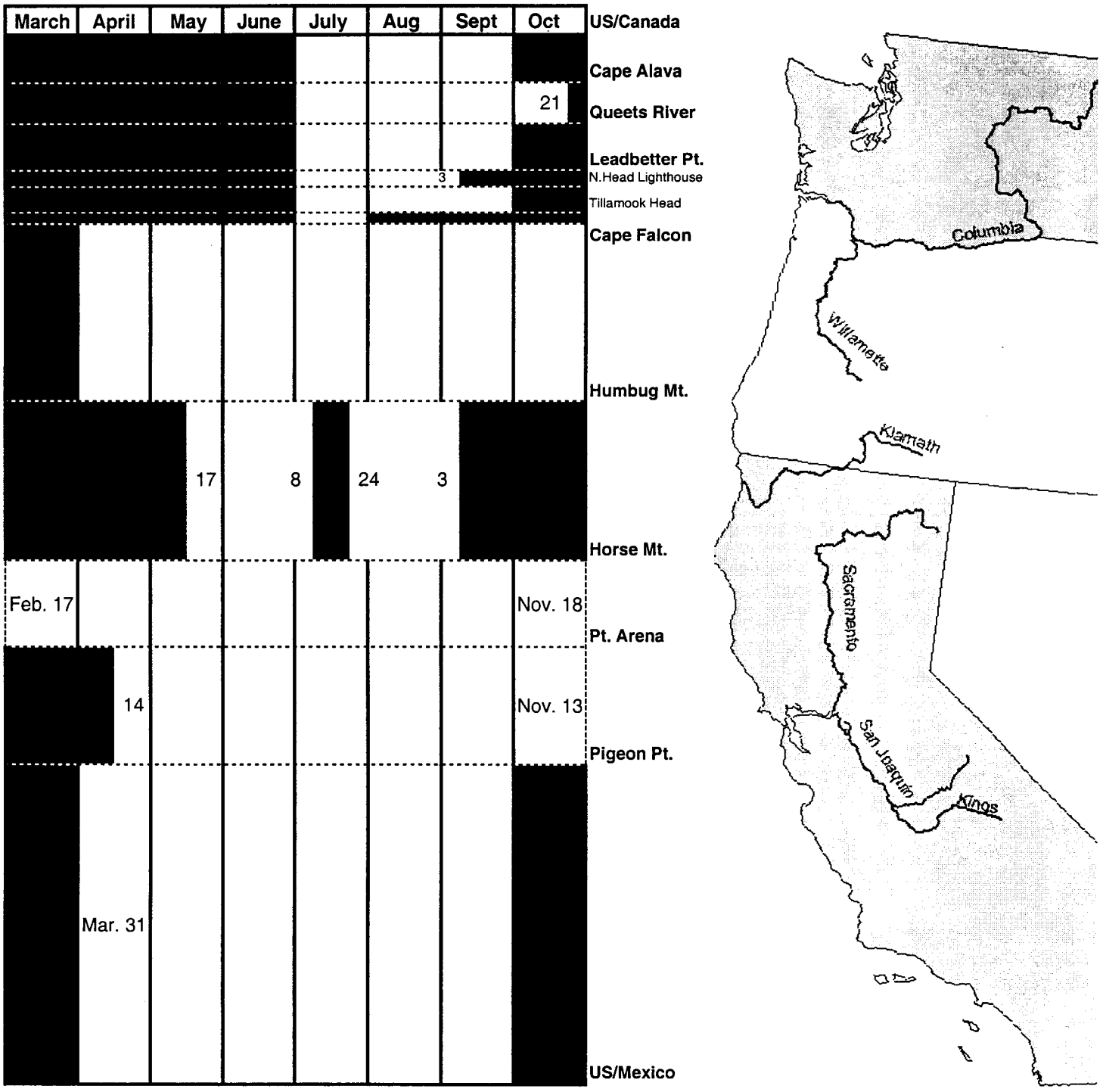


TABLE 3. Council adopted **treaty Indian** ocean troll salmon fishery management measures, 2001. (Page 1 of 1)

Tribe and Area Boundaries[a/]	Open Seasons	Salmon Species	Minimum Size[b/] (Inches) Chinook	Coho	Special Restrictions by Area
S'KLALLAM - Washington State Statistical Area 4B (All)	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat; 72 hook maximum per boat.
	July 1 thru earliest of Sept. 15 or chinook or coho quota.[c/]	All	24	16	
MAKAH - Washington State Statistical Area 4B and that portion of the FMA north of 48°02'15" N. lat. (Norwegian Memorial) and east of 125°44'00" W. long.	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat or no more than 4 hand-held lines per person.
	July 1 thru earliest of Sept. 15 or chinook or coho quota[c/]	All	24	16	
QUILEUTE - That portion of the FMA between 48°07'36" N. lat. (Sand Pt.) and 47°31'42" N. lat. (Queets River)	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat.[d/]
	July 1 thru earliest of Sept. 15 or chinook or coho quota.[c/]	All	24	16	
HOH - That portion of the FMA between 47°54'18" N. lat. (Quillayute River) and 47°21'00" N. lat. (Quinault River)	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat.[d/]
	July 1 thru earliest of Sept. 15 or chinook or coho quota[c/]	All	24	16	
QUINAULT - That portion of the FMA between 47°40'06" N. lat. (Destruction Island) and 46°53'18" N. lat. (Point Chehalis)	May 1 thru earlier of June 30 or chinook quota.[c/]	All except coho	24	-	Barbless hooks. No more than 8 fixed lines per boat.[d/]
	July 1 thru earliest of Sept. 15 or chinook or coho quota[c/]	All	24	16	

a/ All boundaries may be changed to include such other areas as may hereafter be authorized by a Federal court for that tribe's treaty fishery.

b/ Applicable lengths, in inches, for dressed, head-off salmon, are 18 inches for chinook and 12 inches for coho. Minimum size and retention limits for ceremonial and subsistence harvest are as follows:

Makah Tribe - None

Quileute, Hoh and Quinault tribes - Not more than 2 chinook longer than 24 inches in total length may be retained per day. Chinook less than 24 inches total length may be retained.

c/ The overall treaty troll ocean quotas are 37,000 chinook and 90,000 coho. The overall chinook quota is divided into 18,500 chinook for the May/June chinook-directed fishery and 18,500 chinook for the July through Sept. all-salmon season. If the chinook quota for the May/June fishery is not fully utilized, the excess fish cannot be transferred into the later all-salmon season. The quotas include troll catches by the S'Klallam and Makah tribes in Washington State Statistical Area 4B from May 1 thru Sept. 30.

d/ The area within a 6 nautical mile radius of the mouths of the Queets River (47°31'42" N. lat.) and the Hoh River (47°45'12" N. lat.) will be closed to commercial fishing. A closure within 2 nautical miles of the mouth of the Quinault River (47°21'00" N. lat.) may be enacted by the Quinault Nation and/or the State of Washington and will not adversely affect the Secretary of Commerce's management regime.

TABLE 4. Chinook and coho **harvest quotas and guidelines** (*) in thousands of fish for Council-adopted ocean salmon fisheries, 2001. (Page 1 of 1)

Fishery or Quota Designation	Chinook	Coho
NORTH OF CAPE FALCON		
TREATY INDIAN COMMERCIAL TROLL[a/]		
May/June (all except coho)	18.5	-
July-Sept. (all salmon)	18.5	90.0
Subtotal	37.0	90.0
NON-INDIAN COMMERCIAL TROLL		
Canada to Cape Falcon (May/June)[b/]	17.0*	-
Canada to Ledbetter Point (July)[c/]	7.0*	12.0
Queets River to Cape Falcon (July-Sept.)[c/]	6.0*	63.0
Subtotal	30.0	75.0
RECREATIONAL		
U.S.-Canada Border to Cape Alava (July 1-Sept. 30)[c/d/]	1.7*	23.4
Cape Alava to Queets River (July1-Oct 21)[c/d/]	1.1*[e/]	5.8[f/]
Queets River to Leadbetter Pt. (July 1- Sept. 30)[c/d/]	19.4*	83.3
Leadbetter Pt. to Cape Falcon (July-Sept.3)[c/d/]	7.8*	112.5[g/]
Subtotal	30.0	225.0
TOTAL NORTH OF CAPE FALCON	97.0	390.0
SOUTH OF CAPE FALCON		
COMMERCIAL TROLL (all except coho)		
Humbug Mt. to OR-CA border (June)	1.5	-
Humbug Mt. to OR-CA border (Aug.)	3.0	-
Humbug Mt. to Humboldt S. Jetty (Sept.)[h/]	8.0	-
Horse Mt. to Pt. Arena (May)	3.0	-
Subtotal	15.5	
RECREATIONAL (selective coho fishery)		
Cape Falcon to Humbug Mt. (July)[c/]	-	55.0
TOTAL SOUTH OF CAPE FALCON	15.5	55.0

a/ The overall chinook quota is divided into 18,500 chinook for the May/June chinook-directed fishery and 18,500 chinook for the July-Sept. all-salmon season. If the chinook quota for the May/June fishery is not fully utilized, the excess fish cannot be transferred into the later all-salmon season. The quotas include troll catches in ocean management areas and fish taken by the S'Klallam and Makah tribes in Washington State Statistical Area 4B from May 1 thru Sept. 30. For the Makah encounter rate study, legal sized fish retained in open periods will be included in the tribal quota.

b/ In the overall non-Indian commercial chinook quota north of Cape Falcon, 5,000 chinook from the area south of the Queets River in the May/June harvest guideline are the result of impacts assessed at the July-September harvest impact rate. Inseason, these 5,000 chinook (or remaining portion thereof) may be transferred south of the Queets River to the July-September harvest guideline at a one-to-one rate if not caught in the May/June fishery. Any chinook remaining in the May/June harvest guideline in excess of 5,000 may be transferred to the July-September harvest guideline on a fishery impact equivalent basis.

c/ Fisheries directed primarily at marked hatchery coho. The coho quotas limit harvest to a landed catch of coho with healed adipose fin clips.

d/ The subarea chinook harvest is a guideline. The fisheries are restrained by the overall chinook quota north of Cape Falcon.

e/ The 1,100 sub area chinook guideline includes 100 chinook set aside for the Sept. 24 through Oct. 21 period.

f/ The 5,850 sub area coho guideline includes 500 coho set aside for the Sept. 24 through Oct. 21 period.

g/ The 112,500 sub area coho guideline includes 10,000 coho set aside for the Sept. 4-30 period.

h/ The 8,000 chinook quota includes a harvest guideline limiting combined landings at the ports of Gold Beach, Port Orford, and Brookings to no more than 2,000 chinook. If this guideline is reached prior to the overall quota, the fishery will close north of the Oregon-California border.

TABLE 5. Projected **key stock escapements** (thousands of fish) or management criteria for Council area fishery measures, 2001[a/]. (Page 1 of 2)

Key Stock/Criteria	Projected Ocean Escapement[b/] or Other Criteria	Spawner Objective or Other Comparative Standard as Noted
CHINOOK		
Upper Columbia River Brights	135.3	57.3 Minimum ocean escapement to attain 43.5 adults over McNary Dam, with normal distribution and no mainstem harvest.
Mid-Columbia Brights	42.7	16.6 Minimum ocean escapement to attain 5.75 adults for Bonneville Hatchery and 2.0 for Little White Salmon Hatchery egg-take, assuming average conversion and no mainstem harvest.
Lower Columbia River Hatchery Tules	30.4	23.4 Minimum ocean escapement to attain 14.3 adults for hatchery egg-take, with average conversion and no lower river mainstem or tributary harvest
Lower Columbia River Natural Tules	41.2%	65.0% ESA guidance met by a total adult equivalent exploitation rate of no more than 65.0% on Coweeman tules
Lewis River Wild (threatened)	18.4	5.7 MSY spawner goal for North Lewis River
Spring Creek Hatchery Tules	61.8	11.1 Minimum ocean escapement to attain 7.0 adults for Spring Creek Hatchery egg-take, assuming average conversion and no mainstem harvest.
Snake River Fall (threatened) SRFI	45.0%	≤70.0% Of 1988-1993 base period exploitation rate for all ocean fisheries (ESA jeopardy standard).
Klamath River Fall	47.0	47.0 Natural spawning adult objective (33% of preseason predicted adult natural spawning escapement absent ocean fishing)
Federally recognized tribal harvest	50.0%	50.0% Equals 75.5 (thousand) fish for Yurok and Hoopa tribal fisheries
Age 4 ocean harvest rate	17.0%	≤17.0% ESA jeopardy standard for threatened California coastal chinook
KMZ sport fishery allocation	17.0%	17.0% KFMC allocation agreement
CA/OR allocation (minus KMZ sport)	55% / 45%	- Result of 2001 season structure
River recreational fishery allocation	39.5%	≥15.0% Agreed to by California Fish and Game Commission; Equals 29.8 (thousand) fish for recreational inriver fisheries
Sacramento River Winter (endangered)	31.0%	≥31.0% ESA jeopardy standard for increase in 3 year adult spawner replacement rate over that observed for the 1989-1993 brood years
Sacramento River Fall	195.1	122.0-180.0 Sacramento River fall natural and hatchery adult spawners

TABLE 5. Projected **key stock escapements** (thousands of fish) or management criteria for Council area fishery measures, 2001[a/]. (Page 2 of 2)

Key Stock/Criteria	Projected Ocean Escapement[b/] or Other Criteria	Spawner Objective or Other Comparative Standard as Noted
		COHO
Skagit	43.0% (5.0%) 46.9	≤60% 30.0 2001 Annual management ceiling: total exploitation rate[c/] MSP level of adult spawners Identified in FMP.
Stillaguamish	45.0% (9.0%) 18.1	≤50% 17.0 2001 Annual management ceiling: total exploitation rate[c/] MSP level of adult spawners Identified in FMP
Snohomish	43.0% (9.0%) 96.5	≤60% 70.0 2001 Annual management ceiling: total exploitation rate[c/] MSP level of adult spawners Identified in FMP
Hood Canal	45.0% (8.8%) 40.6	≤65% 21.5 2001 Annual management ceiling: total exploitation rate[c/] MSP level of adult spawners Identified in FMP
Strait of Juan de Fuca	37.0% (10.1%) 15.2	≤40% 12.8 2001 Annual management ceiling: total exploitation rate[c/] MSP level of adult spawners Identified in FMP
COASTAL NATURAL:		
Quillayute Fall	20.6	6.3-15.8 MSY adult spawner range (not annual target). Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Hoh	7.6	2.0-5.0 MSY adult spawner range (not annual target). Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Queets: Wild	10.6	5.8-14.5 MSY adult spawner range (not annual target). Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Grays Harbor	46.6	35.4 MSP level of adult spawners. Annual management objectives may be different and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders.
Oregon Coastal Natural (threatened)	7.41%	≤15.0% ESA jeopardy standard for marine and freshwater fishery exploitation rate
Northern California (threatened)	3.03%	≤13.0% ESA jeopardy standard for surrogate R/K hatchery coho marine fishery exploitation rate
HATCHERY:		
Columbia River Early	651.3	38.7 Minimum ocean escapement to attain hatchery egg-take goal of 19.6 early adult coho, with average conversion and no mainstem or tributary fisheries.
Columbia River Late	268.7	19.4 Minimum ocean escapement to attain hatchery egg-take goal of 15.2 late adult coho, with average conversion and no mainstem or tributary fisheries.

a/ Projections in the table assume a WCVI mortality of 2,000 coho; Southeast Alaska harvest of 178,500 chinook per PST agreement; WCVI troll catch of 55,000 chinook (includes chinook in the fall of 2000); WCVI recreational catch of 36,600.

b/ Ocean escapement is the number of salmon escaping ocean fisheries and entering freshwater with the following clarifications. Ocean escapement for Puget Sound stocks is the estimated number of salmon entering Area 4B that are available to U.S. net fisheries in Puget Sound and spawner escapement after impacts from the Canadian, U.S. ocean, and Puget Sound troll and recreational fisheries have been deducted. Numbers in parentheses represent Council area exploitation rates for Puget sound coho stocks. For Columbia River early and late coho stocks, ocean escapement represents the number of coho after the Buoy 10 fishery. The escapement numbers provided for OCN coho are spawners in SRS accounting.

c/ Annual management objectives may be different than FMP goals, and are subject to agreement between WDFW and the treaty tribes under U.S. District Court orders. Total exploitation rate includes Alaskan, Canadian , Council area, Puget Sound and freshwater fisheries, and is calculated as total fishing mortality divided by total fishing mortality plus spawning escapement.

TABLE 6. Projections of **chinook and coho harvest impacts** for ocean salmon fishery management measures, 2001. (NA = not available) (Page 1 of 1)

Area and Fishery	2001 Catch Projection	2001 Bycatch Mortality[a/] Projection	Observed in 2000 Catch	Observed in 2000 Bycatch Mortality
OCEAN FISHERIES:[b/]		**CHINOOK (thousands of fish)**		
NORTH OF CAPE FALCON				
Treaty Commercial Troll	37.0	7.0	7.6	2.1
Non-Indian Commercial Troll	30.0	17.5	12.9	2.7
Recreational	30.0	4.5	13.6	2.5
CAPE FALCON TO HUMBUG MT.				
Commercial Troll	147.4	16.2	130.2	14.3
Recreational	6.3	0.7	12.9	0.8
HUMBUG MT. TO HORSE MT.				
Commercial Troll	15.4	1.7	5.3	0.6
Recreational	25.7	2.8	25.0	3.8
SOUTH OF HORSE MT.				
Commercial	330.2	36.3	427.4	48.2
Recreational	115.8	12.7	166.7	17.6
TOTAL OCEAN FISHERIES				
Commercial Troll	560.0	78.7	583.4	67.9
Recreational	177.8	20.7	218.2	24.7
INSIDE RECREATIONAL FISHERIES:				
Buoy 10	7.9	NA	5.9	NA
OCEAN FISHERIES:		**COHO (thousands of fish)**		
NORTH OF CAPE FALCON				
Treaty Commercial Troll	90.0	4.7	22.2	1.2
Non-Indian Commercial Troll[c/]	75.0	12.7	17.3	3.9
Recreational[c/]	225.0	26.2	77.5	9.2
SOUTH OF CAPE FALCON				
Commercial Troll	-	27.9	0.0	12.7
Recreational[c/]	55.0	12.9	19.9	9.9
TOTAL OCEAN FISHERIES				
Commercial Troll	165.0	45.3	39.5	17.8
Recreational[c/]	280.0	39.1	97.4	19.1
INSIDE RECREATIONAL FISHERIES:				
Buoy 10[c/d/]	140.0	14.6	21.2	2.0

a/ The bycatch mortality reported in this table consists of hook-and-release and drop-off mortality of chinook and coho salmon in fisheries which have minimum size limits or special species retention restrictions (e.g., all-salmon-except-coho or all-salmon-except-chinook seasons, or selective fisheries for marked coho). The hook-and-release mortality rates used by the Council are provided below by gear and area. In addition, a drop-off mortality impact is applied which is generally 5% of the landed catch or estimated encounters for non-retention fisheries.

Commercial - 26% of fish hooked-and-released
Sport north of Pt. Arena - 14% of fish hooked-and-released
Sport south of Pt. Arena - 28.1% (weighted average of California style mooching and trolling) of fish hooked-and-released

b/ Includes Oregon territorial water, late season chinook fisheries.

c/ Selective fishery allows retention only of coho with a healed adipose fin clip.

d/ Buoy 10 fishery opens Aug. 1 with an expected landed catch of 82,600 marked coho in Aug. and 57,400 marked coho in Sept. All retained coho must have a healed adipose fin clip.

TABLE 7. Expected coastwide Oregon coastal natural (**OCN**) and Rogue/Klamath (**RK**) coho **harvest mortality and exploitation rates** by fishery for Council-adopted fisheries, 2001.[a/] (Page 1 of 1)

	Harvest Mortality and Exploitation Rate			
	OCN		RK	
Fishery	Number	Percent	Number	Percent
SOUTHEAST ALASKA	15	0.03	0	0.00
BRITISH COLUMBIA	2	0.00	0	0.00
PUGET SOUND/STRAITS	82	0.17	0	0.00
NORTH OF CAPE FALCON				
Treaty Indian Troll	318	0.68	0	0.00
Recreational	334	0.71	25	0.05
Non-Indian Troll	229	0.49	0	0.00
SOUTH OF CAPE FALCON				
Recreational:				
Cape Falcon to Humbug Mt.	453	0.97	45	0.09
Humbug Mt. to Horse Mt. (KMZ)	186	0.40	632	1.27
Fort Bragg	117	0.25	337	0.68
South of Pt. Arena	173	0.37	97	0.20
Troll:				
Cape Falcon to Humbug Mt.	825	1.76	52	0.10
Humbug Mt. to Horse Mt. (KMZ)	28	0.06	103	0.21
Fort Bragg	18	0.04	69	0.14
South of Pt. Arena	153	0.33	81	0.16
BUOY 10	98	0.21	63	0.13
ESTUARY/FRESHWATER	444	0.94	---	---
TOTAL	3,475	7.41	1,504	3.03
2000 Total	4,340	8.23	1,065	5.97

a/ OCN adult spawners (SRS accounting): 2000 observed = 76,600; 2001 projection = 44,000.

TABLE 8. Expected **mark rates** for Council-adopted selective **coho** fisheries, 2001. (Page 1 of 1)

Area	Fishery	June	July	Aug.	Sept.	2000 Observed
	North of Cape Falcon					
Neah Bay (Area 4)	Recreational		65.1%	51.1%	-	34%
	Non-Indian Troll		59.5%	-	-	-
La Push (Area 3)	Recreational		81.4%	65.4%	-	51%
	Non-Indian Troll		63.8%	-	-	-
Westport (Area 2)	Recreational		81.9%	79.4%	-	70%
	Non-Indian Troll		71.5%	72.8%	-	-
Columbia River (Area 1)	Recreational		88.2%	84.3%	-	86%
	Non-Indian Troll		83.7%	83.4%	-	-
Buoy 10	Recreational		-	84.8%	83.1%	83%
	South of Cape Falcon					
Cape Falcon to Humbug Mt.	Recreational		-	-	-	74%
Tillamook	Recreational	85.3%	84.4%	-	-	-
Newport	Recreational	78.8%	82.0%	-	-	-
Coos Bay	Recreational	80.1%	82.6%	-	-	-

TABLE 9. Estimates of **exvessel value** for Council-adopted, non-Indian **commercial troll** regulations. (Page 1 of 1)

Management Area	Exvessel Value (thousands of dollars)[a/] Projection for 2001[b/]	Estimate for 2000	Percent Change from Estimated 2000 Values	1976-1990 Average[c/]	Percent Change from 1976-1990 Average
NORTH OF CAPE FALCON	1,123	388	189%	6,166	-82%
Cape Falcon to Humbug Mt.	3,190	2,899	10%	14,427	-78%
Humbug Mt to Horse Mt.	360	107	235%	7,256	-95%
Horse Mt. to Pt. Arena	326	214	53%	6,732	-95%
South of Pt. Arena	6,612	8,544	-23%	13,723	-52%
TOTAL SOUTH OF CAPE FALCON	10,487	11,764	-11%	42,137	-75%
WEST COAST TOTAL	11,610	12,153	-4%	48,303	-76%

a/ Exvessel values are not comparable to the community income impacts shown in Table 10.
b/ Dollar value estimates are based on expected catches in the management area, and 2000 exvessel prices and average weights per fish.
c/ All dollar values are adjusted to 2000 real values.

TABLE 10. Estimates of **angler trips** and coastal community **income** generated for the Council-adopted **recreational** ocean salmon fishery regulations compared to 2000 and the 1976-1990 average. (Page 1 of 1)

Management Area	Angler Trips (thousands) Projection for 2001[b/]	Estimate for 2000	1976-1990 Average	Coastal Community Income Impacts (thousands of dollars)[a/] Projection for 2001	Estimate for 2000	1976-1990 Average	Projected Percent Change in Income Impacts Compared to 2000 Estimate	Compared to 1976-1990 Average
NORTH OF CAPE FALCON	155	53	271	8,854	3,049	15,616	190%	-43%
Cape Falcon to Humbug Mt.	97	48	184	4,772	2,377	9,618	101%	-50%
Humbug Mt. to Horse Mt.	50	42	117	2,251	1,894	5,564	19%	-60%
Horse Mt. to Pt. Arena	27	25	12	1,781	1,693	741	5%	140%
South of Pt. Arena	166	163	116	14,242	13,992	11,825	2%	20%
TOTAL S. OF CAPE FALCON	339	279	429	23,046	19,956	27,748	15%	-17%
WEST COAST TOTAL	494	332	701	31,899	23,005	43,364	39%	-26%

a/ Income impacts are totals for individual communities. Impacts between communities in the management area have not been counted. Income impacts are not comparable to the exvessel values shown in Table 9. All dollar values are adjusted to 2000 real values.
b/ The estimates for the number of trips south of Cape Falcon are based on comparison of the seasons proposed for 2001 to those in place in 2000 and the associated effort levels. The estimates for trips north of Cape Falcon are based on 2000 season retained catch per angler.

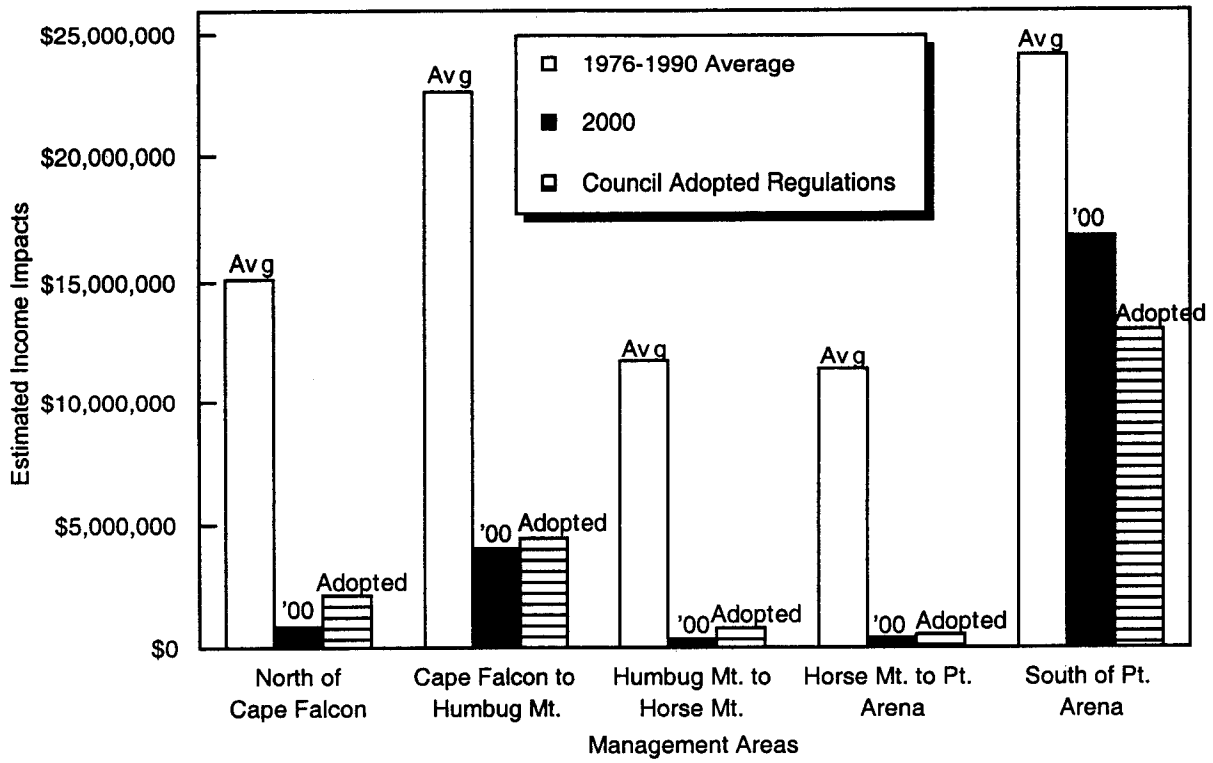


FIGURE 5. Estimate of coastal community income impacts associated with the commercial troll fishery for the 2001 Council-adopted management measures, estimated 2000 impacts, and the 1976-1990 average.

NOTE: Estimates are based on landing areas and include projections of out-of-area catch.

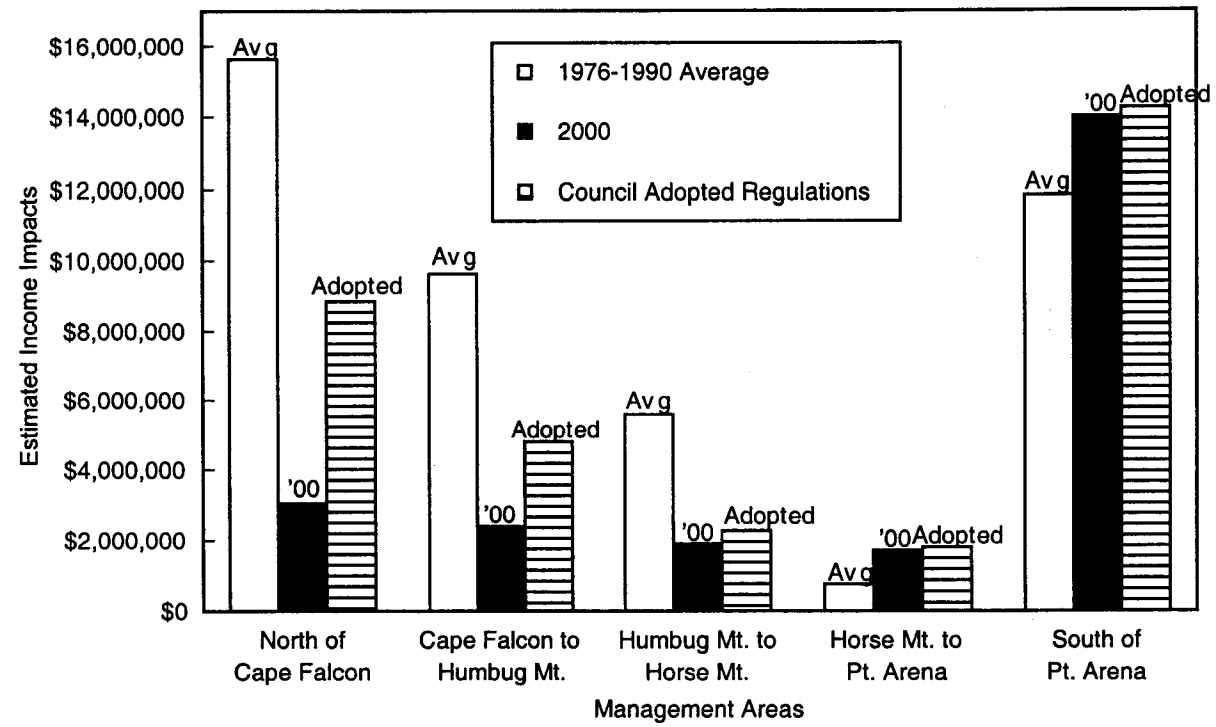


FIGURE 6. Estimate of coastal community income impacts associated with the recreational fishery for the 2001 Council-adopted management measures, estimated 2000 impacts, and the 1976-1990 average.

APPENDIX A
BIOLOGICAL EVALUATION OF 2001 COUNCIL OCEAN SALMON FISHERY IMPACTS ON FISH SPECIES LISTED UNDER THE ENDANGERED SPECIES ACT

INTRODUCTION

Amendment 12 to the Pacific Coast Salmon Fishery Management Plan (FMP) requires that the Pacific Fishery Management Council (Council) manage their fisheries consistent with consultation standards developed by the National Marine Fisheries Service (NMFS) regarding actions necessary to protect species listed under the Endangered Species Act (ESA). NMFS approved Amendment 14 on September 27, 2000, but it does not change the requirements of Amendment 12.

Since 1989, NMFS has listed 16 evolutionarily significant units (ESU) of salmon under the ESA (Table A-1). As the listings have occurred, NMFS has initiated formal section 7 consultations and issued biological opinions (Table A-2) that consider the impacts to listed salmonid species, and some salmonid species proposed for listing, resulting from proposed implementation of the FMP, or in some cases, from proposed implementation of the annual management measures. NMFS has also reinitiated consultation on certain ESUs when new information has become available on the status of the stocks or on the impacts of the FMP on the stocks. Some opinions have concluded that implementation of the FMP is not likely to jeopardize the continued existence of certain listed ESUs. Other opinions have found the FMP is likely to jeopardize certain listed ESUs, and have identified reasonable and prudent alternatives (consultation standards) that would avoid the likelihood of jeopardizing the continued existence of the ESU under consideration.

TABLE A-1. Salmon ESUs listed under the Endangered Species Act.

Species	Evolutionarily Significant Unit	Status	Federal Register Notice
Chinook Salmon (O. tshawytscha)	Sacramento River Winter	Endangered	54 FR 32085 8/1/89
	Snake River Fall	Threatened	57 FR 14653 4/22/92
	Snake River Spring/Summer	Threatened	57 FR 14653 4/22/92
	Puget Sound	Threatened	64 FR 14308 3/24/99
	Lower Columbia River	Threatened	64 FR 14308 3/24/99
	Upper Willamette River	Threatened	64 FR 14308 3/24/99
	Upper Columbia River Spring	Endangered	64 FR 14308 3/24/99
	Central Valley Spring	Threatened	64 FR 50394 9/16/99
	California Coastal	Threatened	64 FR 50394 9/16/99
Chum Salmon (O. keta)	Hood Canal Summer-Run	Threatened	64 FR 14508 3/25/99
	Columbia River	Threatened	64 FR 14508 3/25/99
Coho Salmon (O. kisutch)	Central California Coastal	Threatened	61 FR 56138 10/31/96
	S. Oregon/ N. California Coastal	Threatened	62 FR 24588 5/6/97
	Oregon Coastal	Threatened	63 FR 42587 8/10/98
Sockeye Salmon (O. nerka)	Snake River	Endangered	56 FR 58619 11/20/91
	Ozette Lake	Threatened	64 FR 14528 3/25/99

TABLE A-2. NMFS' biological opinions on ocean fisheries implemented under the FMP and duration of the proposed action covered by each opinion.

Date	ESU covered and effective period
March 8, 1996	Snake River chinook and sockeye (until reinitiated), Sacramento River winter chinook (5 years)
February 18, 1997	Sacramento River winter chinook (4 years)
April 28, 1999	Oregon coastal coho, S. Oregon/ N. California coastal coho, Central California coastal coho (until reinitiated)
April 30, 1999	Upper Columbia River spring chinook, Upper Willamette River chinook, Lower Columbia River chinook, Puget Sound chinook (1 year)
April 28, 2000	Central Valley spring chinook and California coastal chinook (until reinitiated)
April 28, 2000	Upper Columbia River spring chinook, Upper Willamette River chinook, Lower Columbia River chinook, Puget Sound chinook (1 year)

NMFS is preparing a supplemental biological opinion which will be completed prior to May 1, 2001. This biological opinion will cover the potential effects of ocean salmon fisheries occurring May 1, 2001 through April 30, 2002 on listed sockeye, chum, chinook, and steelhead ESUs not covered by existing biological opinions. The potential effects of salmon fisheries implemented under the FMP on Sacramento River Winter chinook will be reintiated for the year 2002.

NMFS, in a March 2, 2001, letter to the Council, provided guidance on protective measures for listed species during the 2001 fishing season. The letter summarized the requirements of NMFS' biological opinions and pending 4(d) rules on the effects of the FMP on listed salmon and provided the anticipated consultation standards of the biological opinion in preparation for the 2001 management season. The ESA consultation standards and the exploitation rate (or other criteria) projected for the 2001 management measures are presented in Table A-3. Some listed stocks are either rarely caught in Council fisheries (e.g. spring chinook from the upper Columbia and Willamette rivers) or already receive sufficient protection from FMP and ESA consultation standards for other listed ESUs (e.g. Central Valley spring chinook). NMFS has determined that management actions designed to limit catch from these ESUs beyond what will be provided by harvest constraints for other stocks are not necessary.

Additional listed salmonid ESUs that are found within the Council area, but which are not significantly impacted by Council managed fisheries, include:

Sockeye

Snake River (endangered)
Ozette Lake Sockeye (threatened)

Chum

Columbia River (threatened)
Hood Canal summer (threatened)

Steelhead

Southern California (endangered)
South-central California coast (threatened)
Upper Columbia River (endangered)
Middle Columbia River (threatened)
Snake River Basin (threatened)
Central Valley, California (threatened)
Central California coast (threatened)
Upper Willamette River (threatened)
Lower Columbia River (threatened)
Northern California (threatened)

TABLE A-3. Impacts of 2001 management measures on listed evolutionarily significant units.

ESU	Stock Representation in FMP	ESA Consultation Standard		2001 Management Measures	
Central Valley spring chinook - threatened	Sacramento River spring	No jeopardy standard.		Delay opening of the recreational fishery between Pt. Arena and Pigeon Pt. until mid-April, and between Pigeon Pt. and the U.S.-Mexico Border until about April 1.	
Sacramento River winter chinook - endangered	Sacramento River winter	≥31% increase in 3-year adult replacement rate over that observed for the 1989-1993 brood years.		31.0% increase in adult replacement rate	
California Coastal chinook - threatened	Eel, Mattole, and Mad Rivers	≤17% age-4 ocean harvest rate on Klamath River fall chinook.		17.0% age-4 ocean harvest rate	
Lower Columbia River chinook - threatened	• Sandy, Cowlitz, Kalama, Lewis spring • Sandy, Cowlitz, Kalama, fall • North Fork Lewis River fall	• No specific requirements • Adult equivalent exploitation rate on Coweeman tule fall chinook ≤ 65%. • 5,700 MSY level adult spawning escapement		• Meet hatchery escapement goals 41.2% AEQ exploitation rate 13,100	
Upper Willamette chinook - threatened	Upper Willamette River spring	No specific requirements. Rare occurrence in Council fisheries		-	
Upper Columbia River spring chinook - endangered	Upper Columbia River spring	No specific requirements. Rare occurrence in Council fisheries		-	
Snake River fall chinook - threatened	Snake River fall	30% reduction from the 1988-1993 average adult equivalent age-3/age-4 exploitation rate for all ocean fisheries		55% reduction from 1988-1993 average AEQ ocean exploitation rate	
Snake River spring/summer chinook - threatened	Snake River spring/summer	No specific requirements. Rare occurrence in Council fisheries		-	
Puget Sound chinook - threatened		Exploitation Rate	Spawner Escapement	Exploitation Rate	Spawner Escapement
	• Elwha summer/fall	• 10% So US		6%	2,400
	• Skokomish summer/fall	• 15% Preterm. So US	1,200	12%	1,100
	• Nooksack spring	• 7% So US		7%	1,100
	• Skagit summer/fall	• 52% Total		40%	11,500
	• Skagit spring	• 42% Total		21%	1,300
	• Stillaguamish summer/fall	• 25% Total		17%	1,500
	• Snohomish summer/fall	• 32% Total		23%	3,900
	• Cedar River summer/fall	• 15% Preterm So US		12%	260
	• White River spring	• 17% Total		17%	1,100
	• Green River summer/fall	• 15% Preterm So US	5,800	12%	11,300
	• Nisqually summer/fall	• NA	1,100		1,100
	• Mid-Hood Canal fall	• 12% So US		12%	390
Central California Coast coho - threatened	Not yet represented	No retention of coho in commercial and recreational fisheries off California.		No retention of coho in California fisheries	
S Oregon/N California Coastal coho - threatened	• S. Oregon coast natural • Northern California	≤13% marine exploitation rate on Rogue/Klamath hatchery coho.		3.0% marine exploitation rate	
Oregon Coast coho - threatened	• S . Central OR coast • N. Central OR coast • N. Oregon coast natural	13%-35% (15% in 2001) combined marine/freshwater exploitation rate, depending on parent escapement and ocean survival trends (Amendment 13).		7.4% marine exploitation rate	

ENVIRONMENTAL ASSESSMENT FOR PACIFIC FISHERY MANAGEMENT COUNCIL'S PROPOSED 2001 OCEAN SALMON FISHERY

An Environmental Assessment (EA) is prepared to determine if an action will have a significant impact on the quality of the human environment and thereby constitute a major action requiring preparation of an Environmental Impact Statement (EIS). An EIS is not required if the EA concludes there is no significant impact. The Pacific Fishery Management Council (Council or PFMC) staff has prepared this EA in accordance with 40 CFR 1501.3 and 1508.9, and National Oceanic and Atmospheric Administration (NOAA) Administrative Order 216-6.

This EA summarizes and incorporates by reference the findings and analyses developed by the Council's Salmon Technical Team (STT) in its three preseason reports (STT 2001b; 2001c; 2001d). It also references the Council's reports and public process which provide details of the alternatives, proposed action, fishery impacts, and public hearing record necessary for a thorough consideration of the Council's proposed annual ocean salmon fishery management measures.

PURPOSE AND NEED FOR ACTION

The purpose and need for action is to establish annual ocean salmon fishery management measures responsive to current salmon abundance and the Council's biological and socio-economic management objectives. These objectives are provided in the *Pacific Coast Salmon Plan* (PFMC 1997) and Amendment 14 (PFMC 2000), which comprise the Council's current salmon fishery management plan (FMP).

The Council's salmon FMP is a framework style plan that lays out a prescribed set of parameters that the Council must stay within when setting the annual ocean salmon fishery management measures in the exclusive economic zone (EEZ) off the coasts of Washington, Oregon, and California (PFMC 1984). The salmon FMP has been evaluated in regards to compliance with the National Environmental Policy Act (NEPA) numerous times. From 1976 through 1983, an EIS or supplemental EIS (SEIS) was completed for the salmon fishing season each year. This process was extremely cumbersome and resulted in the comprehensive salmon framework plan amendment in 1984, along with a SEIS for this new way of managing the fishery. Since the 1984 SEIS, the salmon framework FMP has been updated and amended several times. The last SEIS for the framework plan was completed on August 11, 2000 for Amendment 14 (65 FR 49237).[1/] As long as the annual ocean salmon fishery management measures fall with the parameters of the salmon FMP, they will be in compliance with NEPA, the 1984 SEIS, and the 2000 SEIS. However, since SEISs are not prepared on a regular basis, the Council prepares an EA for the proposed annual management measures in conjunction with the STT preseason reports to determine if the measures are within the scope of the most recent SEIS.

ALTERNATIVES

The Council's final ocean salmon season recommendations are based on a range of options, or alternatives, presented in Preseason Report II (STT 2001c); and guidance received from deliberations at management fora such as the north of Cape Falcon planning process, sponsored by the states of Washington and Oregon and the treaty Indian tribes in that area, the Klamath Fishery Management Council, and from public hearings sponsored by the Council and the states of Washington, Oregon and California. Final recommendations

1/ The Council prepared Amendment 14 to the salmon FMP and submitted it on June 12, 2000, for Secretarial review. NMFS published a notice of availability for Amendment 14 in the Federal Register on June 27, 2000 (65 FR 39584), announcing a 60-day public comment period, which ended on August 28, 2000. NMFS approved Amendment 14 on September 27, 2000. The proposed rule was published in the Federal Register on October 20, 2000 (65 FR 63047), with the 45-day public comment period ending on December 4, 2000. The final rule is currently under review with NMFS. A SEIS prepared in conjunction with Amendment 14 updates the 1984 SEIS prepared for the framework salmon FMP.

concerning catch quotas and harvest rates may vary from the range of options presented in the report depending upon determination of allocations, allowable harvest levels, public comment, or the final impact analyses completed by the STT. Elements of the options may be recombined to alter season patterns; measures such as bag limits, days of fishing per week, special landing restrictions and other specific regulatory details may also change. In addition, inseason modification of management measures may be used to assure achievement of the Council's management objectives. Specific details pertaining to season structure and special regulations for the treaty Indian troll fishery north of Cape Falcon are established in tribal regulations. Chinook and coho quota levels for the treaty Indian troll fishery may be adjusted if significant changes in incidental fishing mortality result from tribal regulations.

Preseason Report II (STT 2001c) displays three regulatory options for 2001 commercial troll and recreational ocean salmon fisheries. Complete descriptions of the commercial and recreational options are presented in Preseason Report II Tables 1 and 2, respectively. Quotas under the various options are summarized in Table 3. The biological fishery impacts are presented in Tables 4 through 6 and the economic impacts in Tables 8 and 9. Complete descriptions of the status quo (year 2000) alternative fishery regulations are presented in tables I-1, I-2, and I-3 of Review of 2000 Ocean Salmon Fisheries (STT 2001a). An analysis of the biological impacts of the status quo alternative is presented in Table III-6 of Preseason Report I (STT 2001b). Because of significant changes in the abundance of most salmon stocks, the status quo alternative failed to meet the social and economic objectives of the salmon FMP. Therefore all of the options considered by the Council differed from the status quo alternative (last year's regulations). All options met the conservation objectives of the salmon FMP.

Generally, north of Cape Falcon, Option I has seasons which are the most liberal and Option III the most conservative. The pattern of options is different south of Cape Falcon where the alternatives address the allocation of Klamath River fall chinook among the various fishery sectors and the need to limit impacts on stocks listed under the Endangered Species Act (ESA). This arrangement demonstrates the trade-offs necessary to meet the constraints on limiting stocks south of Cape Falcon.

This year's range of options for the annual ocean salmon fishery management measures off the west coast are summarized in Table EA-1, and are compared to the 2000 ocean salmon fishery management measures and the base period years, 1986-1990, that are used in the preseason forecasting models.

TABLE EA-1. Range of options for 2001 ocean salmon fisheries.

	Thousands of Chinook				Thousands of Coho			
	Range of Options		Catch		Range of Options		Catch	
Fishery	2001	2000	2000	1986-1990	2001	2000	2000	1986-1990
WASHINGTON/NORTHERN OREGON (Canada to Cape Falcon)								
Treaty Commercial	35-37	20-30	8	25	70-90	0-39	33	84
Non-Indian								
Commercial	15-30	0-13	13	51	38-75	13-25	4	73
Sport	15-30	0-13	14	28	113-225	38-75	48	186
CENTRAL OREGON (Cape Falcon to Humbug Mt.)								
Commercial	150-151	154-168	130	365	0	0	0	377
Sport	6	4-6	13	15	28-55	0-25	6	172
SOUTHERN OREGON/NORTHERN CALIFORNIA (Humbug Mt. to Horse Mt., the KMZ)								
Commercial	11-16	12-13	5	75	0	0	0	15
Sport	14-16	13-16	25	49	0	0	0	54
CALIFORNIA SOUTH OF HORSE MT.								
Commercial	269-343	314-342	427	749	0	0	0	37
Sport	111-114	156-160	167	136	0	0	0	5

DESCRIPTION OF THE FISHERY

The Council's salmon FMP provides a management regime for tribal, commercial, and recreational salmon fisheries in the exclusive economic zone (3 to 200 nautical miles) off the coasts of Washington, Oregon, and California. Management by the states and tribes within state territorial and internal waters is coordinated with ocean fishery management regulations to achieve stock conservation objectives and harvests consistent with the requirements of the Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) under which the Council was created. The Council-managed fisheries target on chinook, coho, and, in odd-numbered years in limited areas, pink salmon. A description of the ocean fisheries under the Council's salmon FMP can be found in Chapter IV and Appendix D of the *Review of 2000 Ocean Salmon Fisheries* (STT 2001a) and in Appendix B of Amendment 14 to the salmon FMP (PFMC 1999). Tables EA-2 and EA-3 provide a summary of the number of non-Indian commercial and recreational vessels participating in the fishery and their angling effort or catch.

CONSULTATION AND COORDINATION

Representatives of the following agencies and entities were consulted in formulating the proposed action:

Alaska Department of Fish and Game
California Department of Fish and Game
Idaho Department of Fish and Game
Klamath Fishery Management Council
Oregon Department of Fish and Wildlife
National Marine Fisheries Service
Hoopa Valley Tribe
Northwest and Columbia River Indian Tribes
Pacific Fishery Management Council
Pacific States Marine Fisheries Commission
Washington Department of Fish and Wildlife
U.S. Fish and Wildlife Service
U.S. Coast Guard
Yurok Tribe

In addition, the Council's Salmon Advisory Subpanel, consisting of 17 representatives from the commercial and recreational fishing industry, tribes, and interested public, provided guidance to the Council throughout the March and April Council meetings.

The Council began development of recommended regulations for the 2001 ocean salmon fishery in March with the formal distribution and subsequent review of information developed by the STT in the *Review of 2000 Ocean Salmon Fisheries* (STT 2001a) and *Preseason Report I: Stock Abundance Analysis for 2001 Ocean Salmon Fisheries* (2001b). The management alternatives developed for public review by the Council at its March meeting and an assessment of their biological and economic impacts were distributed to the public in *Preseason Report II: Analysis of Proposed Regulatory Options for 2001 Ocean Salmon Fisheries* (STT 2001c). This report was mailed to the public beginning March 20, 2001, and was also distributed at five regional public hearings held on March 26, 27,and 28, 2001. The management options were also posted on the Council's website (http://www.pcouncil.org).

Public hearings on the proposed salmon fishery management alternatives developed at the March Council meeting were held as follows:

March 26, 2001 - Westport, Washington; and Coos Bay, Oregon
March 27, 2001 - Tillamook, Oregon; and Eureka, California
March 28, 2001 - Moss Landing, California
April 3, 2001 - Sacramento, California (public comment period at the April Council meeting)

Approximately 109 members of the public attended the regional hearings. Of these attendees, 36 persons provided testimony to the Council concerning the proposed seasons. The Council received six public comment letters on the proposed seasons at the Council office between the March and April Council meetings. An additional four persons testified at the April Council meeting prior to the tentative adoption of final recommendations on April 3, 2001.

TABLE EA-2. Ocean recreational salmon fishing effort and catch (in thousands) from charter and private boats off Washington, Oregon and California. (Dashes indicate no season)

Year or Average	Licensed Charter Vessels	Angler Trips		Chinook Catch		Coho Catch	
		Charter	Private	Charter	Private	Charter	Private
			WASHINGTON				
1981-1990	331	77.8	64.7	29.3	11.9	95.7	73.3
1990	273	65.0	94.4	16.6	13.0	90.9	113.6
1991	267	43.7	69.6	5.0	7.3	80.2	111.6
1992	269	38.2	56.8	11.8	6.6	48.5	62.6
1993	265	40.2	68.9	5.8	6.9	52.8	62.3
1994	260	-	-	-	-	-	-
1995	231	17.9	30.0	<0.05	0.4	26.1	37.4
1996	210	15.3	23.5	<0.05	0.2	24.5	24.4
1997	210	12.5	15.1	1.7	2.3	12.5	12.8
1998	198	5.5	6.8	1.1	0.9	5.6	7.1
1999	180	17.5	29.9	5.7	4.1	16.3	23.7
2000	143	17.1	279.0	5.1	3.4	27.9	35.8
			OREGON				
1981-1990	251	51.1	186.2	6.6	27.8	59.3	132.6
1990	170	55.3	191.2	5.1	21.5	61.6	139.1
1991	171	40.3	149.7	1.9	12.5	68.9	190.2
1992	157	30.0	135.4	2.7	9.9	46.2	139.6
1993	148	13.4	66.9	0.9	5.6	16.2	43.1
1994	145	1.4	25.5	0.5	5.5	-	-
1995	134	4.6	31.2	0.3	6.4	4.0	7.9
1996	127	5.6	38.3	1.2	10.1	3.0	4.2
1997	122	3.9	26.4	1.5	6.2	2.4	3.6
1998	129	1.8	24.2	0.5	3.6	0.5	1.8
1999	137	5.5	43.9	0.9	6.9	3.4	10.3
2000	143	9.8	68.7	3.6	21.8	7.5	25.7
			CALIFORNIA				
1981-1990	NA	82.4	111.4	87.4	50.4	3.4	26.7
1990	160	78.4	173.7	78.3	61.6	10.2	41.5
1991	186	69.2	127.4	39.9	40.6	13.5	55.8
1992	140	47.7	80.2	42.4	31.1	1.0	10.5
1993	127	66.0	108.9	66.0	44.0	4.2	25.6
1994	102	72.8	117.1	99.1	84.1	<0.05	0.5
1995	164	152.9	225.6	182.0	215.2	<0.05	0.9
1996	126	84.6	140.9	72.9	91.2	<0.05	0.6
1997	120	102.6	131.7	122.4	106.6	<0.05	0.5
1998	126	67.0	85.0	59.7	62.3	<0.05	0.1
1999	109	62.6	84.4	40.5	47.4	<0.05	0.6
2000	121	88.3	120.4	85.9	94.0	<0.05	0.4

TABLE EA-3. Summary of commercial non-Indian salmon vessel numbers and landings (number of fish) in Washington, Oregon and California in recent years. (Dashes indicate retention is prohibited)

Year or Average	Number of Vessels Landing Salmon	Chinook	Coho
	WASHINGTON		
1981-1985	1,676	61,300	152,500
1986-1990	913	46,200	54,400
1990	897	31,100	90,100
1991	811	28,800	54,200
1992	604	43,600	17,700
1993	474	30,100	13,900
1994	1	not reportable	not reportable
1995	96	<50	25,400
1996	90	-	17,500
1997	51	6,400	-
1998	23	5,900	-
1999	57	17,500	3,800
2000	49	10,300	5,300
	OREGON		
1981-1985	2,531	145,500	310,600
1986-1990	1,990	394,900	397,200
1990	1,557	232,100	121,400
1991	1,217	74,600	306,600
1992	649	109,700	49,600
1993	612	81,500	1,700
1994	371	25,200	-
1995	476	214,000	-
1996	456	175,200	<50
1997	433	149,600	-
1998	373	124,200	-
1999	328	62,400	-
2000	399	135,900	-
	CALIFORNIA		
1981-1885	3,243	462,700	58,700
1986-1990	2,449	794,700	46,800
1990	2,115	423,400	61,000
1991	1,769	294,900	82,300
1992	1,085	163,400	2,500
1993	1,240	279,600	-
1994	1,024	295,600	-
1995	1,104	679,300	-
1996	985	380,600	-
1997	835	487,400	-
1998	670	227,300	-
1999	666	290,900	-
2000	725	429,200	-

A description of the Council's final 2001 ocean salmon fishery management measures, including tables summarizing expected biological impacts was available to the public at the time the Council adopted the 2001 management recommendations (April 5). Further documentation, including the tables noted above plus economic impacts, and the complete detailed description and analysis of the management measures in *Preseason Report III: Analysis of Council Adopted Management Measures for 2001 Ocean Salmon Fisheries* will be available on the Council's website (http://www.pcouncil.org) and for mailing to the public prior to May 1, 2001.

PROPOSED ACTION

The Council recommends the Secretary of Commerce implement the proposed annual ocean salmon fishery management measures as found in Tables 1 through 3 of *Preseason Report III: Analysis of Council Adopted Management Measures for 2001 Ocean Salmon Fisheries* (STT 2001d). Within Preseason Report III, Figures 1 and 4, and Tables 1 and 2 provide a complete description of the non-Indian commercial and recreational salmon fishery management measures proposed for 2001. Table 3 provides the recommendations for the ocean treaty-Indian commercial fishery and Table 4 displays the quota levels for individual fisheries managed under quotas. Details of the harvest impacts are provided in Tables 5, 6 and 7. The impacts are provided in terms of landings and bycatch (nonretention mortality), harvest indexes or rates for species considered under the ESA, and ocean or spawner escapements of stocks with Council conservation objectives. Table 7 provides a breakdown of the fishery impacts on indicator stocks for listed coho and Table 8 provides expected mark rates in recreational fisheries selective for marked hatchery coho (healed adipose fin clip). Tables 9 and 10, and Figures 5 and 6 provide estimates of economic impacts resulting from the proposed fisheries. Appendix A of the report is a biological evaluation for species listed under the ESA.

IMPACT ASSESSMENT

The Council's specific management recommendations comport with the requirements of its approved salmon FMP and require no emergency implementation. For stocks listed or considered for listing under the ESA, the recommendations meet or exceed the terms of the applicable biological opinions which were outlined by the Northwest and Southwest Regional Administrators of NMFS in a letter of March 2, 2001 to the Council Chairman.

Overall, the proposed season provides mostly minor modifications to that of 2000 and is within the range of measures adopted in recent years. The proposed season continues the use of selective recreational fisheries for marked hatchery coho in certain areas, and mark-selective commercial coho fisheries north of Cape Falcon. Selective fisheries for marked hatchery coho were first used successfully in 1998 to allow harvest of hatchery fish while reducing impacts on natural coho stocks. The final recommendation is most similar to Option I in the areas north of the Humboldt South Jetty and from Pt. Arena to Pt. Reyes. The Final recommendation is most similar to Option II between Humboldt South Jetty and Pt. Arena and Areas south of Pt. Reyes. Detailed descriptions and analyses of the Council's proposed management options and final recommendations are contained in preseason reports II and III. Table EA-4 below identifies the specific location of the pertinent descriptions and impact analyses necessary for a complete EA.

TABLE EA-4.

Description or Assessment	Location
Proposed Action	Preseason Report II: Page 1. EA: Page 1
Status Quo Alternative Description	Review of 2000 Ocean Salmon Fisheries Tables I-1, I-2, and I-3
Ecological Impacts	Preseason Report I: Page III-17; Table III-6
Proposed Options (Alternatives):	
Description	Preseason Report II: Pages 1 thru 5; Tables 1 thru 3
Ecological Impacts	Preseason Report II: Pages 6 & 7; Tables 4 thru 6
Social and Economic Impacts	Preseason Report II: Page 8; Tables 8 & 9; Figures 2 & 3
Final Recommendation:	
Description	Preseason Report III: Pages 1 thru 3; Tables 1 thru 4; Figures 1 & 4
Ecological Impacts	Preseason Report III: Pages 3 thru 6; Tables 5 thru 7 Appendix A (biological evaluation for ESA listed stocks)
Social and Economic Impacts	Preseason Report III: Page 7; Tables 9 &10; Figures 5 & 6

With regard to the five criteria listed in Section 6.11 of NOAA Administrative Order 216-6, the effects of the proposed action are summarized or referenced below.

1. *The proposed action will not jeopardize the productive capability of the target resource species or any related stocks that may be affected by the action.*

   The Council's proposed management measures are aimed at achieving maximum sustainable yield (MSY) from the salmon resource, taking into account consultation standards for ESA listed stocks and annual targets below the MSY spawner goal for certain Puget Sound and Washington coastal stocks managed at approved levels in accordance with pertinent U.S. District orders which the Council's salmon FMP recognizes. Table 5 of Preseason Report III lists the objectives and expected escapements of key salmon stocks under the Council's proposed management measures. Table A-3 in Appendix A of Preseason Report III details how the proposed management measures meet standards for ESA listed stocks. All stocks are expected to meet either their ESA consultation standards, long-term spawner objectives, or annual spawner targets as approved under U.S. District Court orders.

2. *The proposed action has no effect on ocean or coastal habitat.*

   The proposed action does not directly affect habitat. However, the Council's action to achieve spawner escapement objectives complements measures to restore and protect habitat in streams and rivers which produce natural populations of chinook and coho salmon.

3. *The proposed action should be neutral with respect to health and safety.*

   The proposed action is expected to be neutral with respect to health and safety. The proposed regulations are within the range of annual regulations implemented since adoption of the salmon framework plan in 1984 and meet the considerations for weather-related safety and harvest opportunity of Amendment 8.

4. *The proposed action does not create an adverse impact on any marine mammal or endangered or threatened species that is beyond that allowed under Section 7 Consultations with NMFS.*

   The proposed fisheries, which are more restrictive than those occurring at the time of framework plan adoption, should be neutral with respect to marine mammal interactions and do not adversely impact any listed marine mammals. The commercial salmon troll fishery in Council waters is listed as a Category III fishery, meaning that annual mortality and serious injury to marine mammals in those fisheries is less than or equal to 1% of the potential biological removal level of regional marine mammal stocks.

The proposed action meets the requirements of the applicable NMFS biological opinions (see Appendix A of Preseason Report III for a detailed assessment).

5. *The proposed action does not have cumulative adverse impacts on target resource species or any related stocks.*

   To achieve the Council's FMP conservation objectives, fishery impacts on the salmon stocks are considered on a cumulative basis throughout the range of the fish.

Social and Economic Effects

The overall 2001 community income impact of the commercial fishery is projected to be $20.9 million, down 6.7% from the 2000 value of $22.4 million, and 75% below the 1976-1990 average. The overall community income impact of the recreational fishery is projected to be $31.9 million, up 39% from the 2000 value of $23.0 million, and 26% below the 1976-1990 average. Community income impacts projected for both the commercial and recreational fisheries off Washington, Oregon, and California (north of Horse Mountain), are well above the disaster levels of the 1994 season.

Controversy

A substantial dispute is not expected over the nature, size, or environmental effects of the proposed action. It is well within the bounds of previous years and assessment methods. The Council continues to refine its abundance and harvest impact estimation models and NMFS has approved Amendment 14 to the salmon FMP. This amendment adds additional stock conservation objectives and information to the FMP and responds to the Magnuson-Stevens Act to provide for stock recovery of any overfished stocks. As a part of the Amendment 14 process, the Council updated the 1984 SEIS for the FMP.

Effects on Certain Freshwater Environments

The actions proposed by the Council will have no significant or adverse effect on flood plains or wetlands, or trails and rivers listed or eligible for listing on the National Trails and Nationwide Inventory of Rivers.

CONSISTENCY WITH FEDERAL AND STATE COASTAL ZONE MANAGEMENT PROGRAMS

The Council has determined that the proposed management measures are consistent to the maximum extent practicable with the approved coastal zone management programs of Washington, Oregon, and California. This determination is based on meeting the goals and objectives of the salmon FMP and its amendments, which, as required under Section 307 of the Coastal Zone Management Act, were previously found to be consistent with the approved coastal management programs of the affected states. The coastal management agencies have been sent the preseason reports prepared by the Council that document the options considered for this action.

FINDING OF NO SIGNIFICANT ENVIRONMENTAL IMPACT

For the reasons discussed and referenced above, it is determined that fisheries to be conducted under the proposed 2001 ocean salmon regulations will not significantly affect the quality of the human environment in ways that have not already been contemplated in the SEISs for the 1984 framework amendment and for Amendment 14 to the FMP in 2000. Accordingly, preparation of a SEIS is not required by section 102(2)(C) of the NEPA or its implementing regulations.

_____ _____

Acting Assistant Administrator for Fisheries, NOAA Date

REFERENCES

PFMC. 1984. Framework amendment for managing the ocean salmon fisheries off the coasts of Washington, Oregon and California commencing in 1985. PFMC, Portland, Oregon.

PFMC. 1997. Pacific coast salmon plan. PFMC, Portland, Oregon.

PFMC. 1999. Appendix B to amendment 14 to the Pacific coast salmon plan. PFMC, Portland, Oregon.

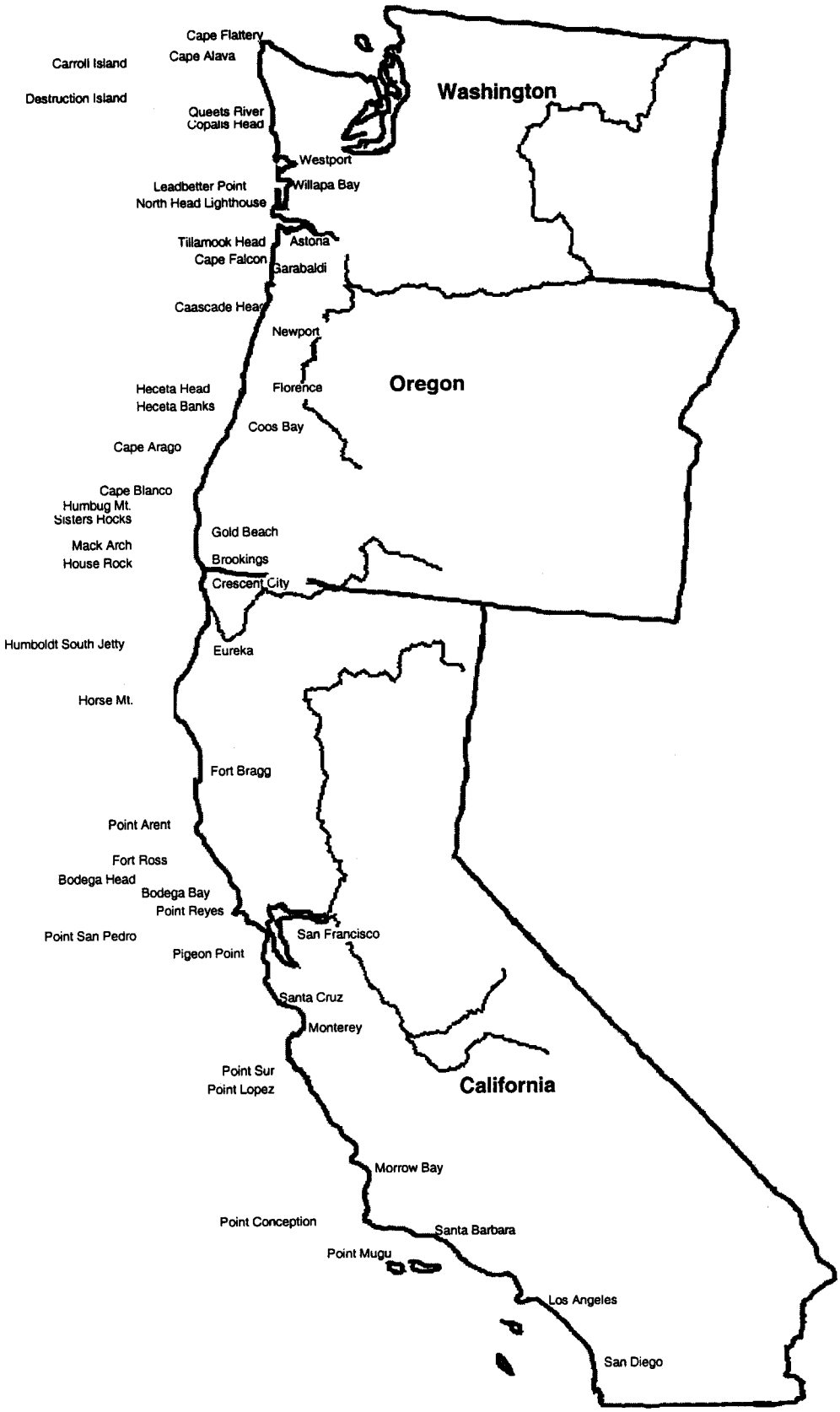
PFMC. 2000. Amendment 14 to the Pacific Coast salmon plan (1997). PFMC, Portland, Oregon.

STT 2001a. Review of 2000 Ocean Salmon Fisheries. PFMC, Portland, Oregon.

STT 2001b. Preseason report I: stock abundance analysis for 2001 ocean salmon fisheries. PFMC, Portland, Oregon.

STT 2001c. Preseason report II: analysis of proposed regulatory options for 2001 ocean salmon fisheries. PFMC, Portland, Oregon.

STT 2001d. Preseason report III: analysis of Council adopted management measures for 2001 ocean salmon fisheries. PFMC, Portland, Oregon.


Cape Flattery
Cape Alava
Carroll Island
Destruction Island
Queets River
Copalis Head
Washington
Westport
Leadbetter Point
Willapa Bay
North Head Lighthouse
Tillamook Head
Astoria
Cape Falcon
Garabaldi
Caascade Head
Newport
Heceta Head
Florence
Oregon
Heceta Banks
Coos Bay
Cape Arago
Cape Blanco
Humbug Mt.
Sisters Hocks
Gold Beach
Mack Arch
House Rock
Brookings
Crescent City
Humboldt South Jetty
Eureka
Horse Mt.
Fort Bragg
Point Arent
Fort Ross
Bodega Head
Bodega Bay
Point Reyes
Point San Pedro
San Francisco
Pigeon Point
Santa Cruz
Monterey
Point Sur
Point Lopez
California
Morrow Bay
Point Conception
Santa Barbara
Point Mugu
Los Angeles
San Diego